Estimate No 24259F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
DOLET HILLS POWER STATION
DEMOLITION ESTIMATE

Bargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 24 00	ARCHITECTURAL									
		BUILDING	OFFICE SERVICE BUILDING	544,350 00 CF	-	-		1 633	71 642	44,615	116,257
		BUILDING	FGD STRUCTURES	575 970 00 CF	-	-		1,728	75,803	47,207	123,010
		BUILDING	MISCELLANEOUS SMALL SIZE BUILDINGS	79 500 00 CF	-	-		239	10,463	6,516	16 979
		BUILDING	DSI BLOWER BUILDING	17 762 00 CF	-	-		53	2 338	1,456	3 793
		METAL SIDING		139,964 00 SF	-	-		840	38,739	26,336	65 075
		MASONRY WALLS		46,703 00 SF	-	-		374	16,391	10,207	26,598
		ARCHITECTURAL						7,117	314 128	197,834	511,962
	10 25 00	CONCRETE CHIMNEY & STACK									
		CONCRETE CHIMNEY, BRICK LINER, DEMOLITION TOP-TO-BOTTOM, PIECE-MEAL NON-EXPLOSIVE METHOD	525 FT TALL X 58 FT BASE	1 00 LS	2,475,000	-					2 475 000
		CONCRETE CHIMNEY & STACK			2,475 000						2,475,000
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
		ELEVATOR		1 00 EA	-	-		150	6,243	3 366	9 609
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		2,000	82 540	44,880	127 420
		MISCELLANEOUS STRUCTURAL ITEM						2,150	88,783	48,246	137,029
	10 31 00	MECHANICAL EQUIPMENT									
		MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		11,300 00 TN	-	-		22,883	1,040,467	492,660	1,533,128
		STEAM TURBINE GENERATOR		1,900 00 TN	-	-		3,848	160 133	86,338	246,471
		FLUES AND DUCTS INCL BREACHING		950 00 TN	-	-		2 565	116 631	55,224	171,855
		BAGHOUSE		5,700 00 TN	-	-		11,543	524,837	248,510	773,348
		ASH HANDLING		350 00 TN	-	-		945	39,331	21,206	60,537
		CONVEYORS, TRUSSES, BENTS, EQUIPMENT		1,010 00 TN	-	-		2 727	113 498	61,194	174,692
		CONVEYORS TRUSSES BENTS, EQUIPMENT, RECLAIM EQUIPMENT		3 500 00 TN	-	-		9,450	393,309	212,058	605,367
		DUST COLLECTOR EQUIPMENT		250 00 TN	-	-		675	28,094	15,147	43,241
		FEEDWATER SYSTEM DEAERATING EQUIPMENT		200 00 TN	-	-		405	16,856	9,088	25,944
		TANKS AND SILOS	FUEL OIL TANK, 2 100,000 GAL, TANK WAS NEVER USED	263 00 TN	-	-		710	29 554	15,935	45 489
		MISCELLANEOUS SMALL TANKS		122 00 TN	-	-		329	13 710	7,392	21 101
		MISCELLANEOUS FUEL OIL EQUIPMENT		70 00 TN	-	-		189	7,866	4,241	12,107
		ACI SILO AND EQUIPMENT		45 00 TN	-	-		122	5,057	2,726	7 783
		DSI SILO AND EQUIPMENT		85 00 TN	-	-		230	9,552	5,150	14 702
		MISCELLANEOUS STORAGE TANKS AND PUMPS		250 00 TN	-	-		675	28 094	15,147	43 241
		WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00 TN	-	-		506	21,070	11,360	32 430
		MISCELLANEOUS EQUIPMENT		570 00 TN	-	-		1,154	48,040	25,901	73,941
		FGD EQUIPMENT		600 00 TN	-	-		1 215	50,568	27,265	77,833
		TURBINE ROOM OH CRANE 80/20 TON		1 00 EA	-	-		300	12,486	6,732	19,218
		TURBINE ROOM GANTRY CRANE, 5 TON		1 00 EA	-	-		28	1,165	628	1,794
		CONDENSER		430 00 TN	-	-		871	36,241	19,540	55,780
		CIRCULATING WATER SYSTEM EQUIPMENT		450 00 TN	-	-		911	37,926	20 448	58 375
		CIRCULATING WATER SYSTEM EQUIPMENT	20 TN GANTRY CRANE	30 00 TN	-	-		61	2,528	1 363	3 892
		MECHANICAL EQUIPMENT						62,340	2,737 013	1,365,254	4,102 267
	10 34 00	HVAC									
		MAIN BUILDING HVAC		1 00 LT	-	-		1,500	62,430	33 660	96 090
		HVAC						1,500	62,430	33,660	96,090
	10 35 00	PIPING									
		PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	2 500 00 TN	-	-		5 063	210,701	113,603	324,304
		CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		900	37,458	20,196	57,654
		PIPING VALVES AND HANGERS	BOP	222 00 TN	-	-		450	18 710	10 088	28,798
		HYDRANTS		1 00 LS	-	-		188	8,948	8,531	17,479
		PIPING						6,600	275,817	152 418	428 235
	10 41 00	ELECTRICAL EQUIPMENT									

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DEMOLITION ESTIMATE

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 41 00	ELECTRICAL EQUIPMENT									
		TRANSFORMERS	MPT AND AUXILIARY TRANSFORMER	369 00 TN	-	-		986	41 036	22 125	63 161
		LIGHT FIXTURE		2,000 00 EA	-	-		800	33,296	17,952	51,248
		MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	468 00 TN	-	-		1,667	69,401	37 418	106,819
		OUTDOOR LIGHTING		1 00 LT	-	-		750	35,790	34,125	69,915
		ELECTRICAL EQUIPMENT						4,203	179,523	111 620	291,143
	10 42 00	RACEWAY CABLE TRAY & CONDUIT									
		CONDUIT		227 00 TN	-	-		1,476	61,410	33,110	94,521
		CABLE TRAY		227 00 TN	-	-		1 362	56,686	30 563	87 250
		RACEWAY CABLE TRAY, & CONDUIT						2,838	118,097	63 674	181,770
	10 43 00	CABLE									
		COPPER WIRE / CABLE		218 00 TN	-	-		2,180	90,732	48,919	139,651
		CABLE						2,180	90 732	48 919	139 651
		WHOLE PLANT DEMOLITION			**2,475,000**			**167,381**	**7,595,423**	**3,880,300**	**13,950,724**
18.00 00		**SCRAP VALUE**									
	18 10 00	CARBON STEEL									
		CARBON STEEL		-38 322 00 TN	-	(6,361,452)	-				(6,361,452)
		CARBON STEEL	RAILROAD TRACK RAIL	-708 00 TN	-	(117,528)	-				(117,528)
		CARBON STEEL	FGD STRUCTURES STEEL	-640 00 TN	-	(106,240)	-		0		(106,240)
		CARBON STEEL	OFFICE SERVICE BUILDING STEEL	-260 00 TN	-	(43 160)	-				(43,160)
		CARBON STEEL		-6 345 00 TN	-	(1,053,270)	-				(1,053 270)
		CARBON STEEL	CONDENSER SHELL	-301 00 TN	-	(49 966)	-				(49,966)
		CARBON STEEL				(7,731,616)					(7,731,616)
	18 30 00	COPPER									
		SOLID COPPER	ISO PHASE	-2 00 TN	-	(8,540)	-				(8,540)
		#1 INSULATED COPPER WIRE 65%		-218 00 TN	-	(490,282)	-				(490 282)
		ADMIRALTY BRASS	CONDENSER TUBES	-129 00 TN	-	(439,890)	-			-	(439,890)
		COPPER				(938,712)					(938 712)
		SCRAP VALUE				**(8,670,328)**					**(8,670,328)**
21.00.00		**CIVIL WORK**									
	21 17 00	EARTHWORK EXCAVATION									
		FOUNDATION EXCAVATION USING 1 CY BACKHOE	SLUDGE POND (4 65 ACRES)	51,489 00 CY	-	-		7 723	371,879	132 610	504,489
		FOUNDATION EXCAVATION, USING 1 CY BACKHOE	METAL CLEANING POND (1 88 ACRES)	21,233 00 CY	-	-		3 185	153,355	54,686	208,041
		EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE		4,238 00 CY	-	-		636	30,609	10 915	41 524
		EARTHWORK, EXCAVATION						11,544	555,844	198,210	754,054
	21,21 00	MASS FILL									
		CUT & FILL, CLAY, 1500 FT HAUL, 14 CY SCRAPER, DOZER-SPREAD COMPACTION, WATERING TRUCK	COVER DISTURBED AREAS OF SITE WITH 2FT OF SOIL	237,806 00 CY	-	-		15,457	757,258	1,574,085	2,331,343
		CUT & FILL CLAY, 1500 FT HAUL, 14 CY SCRAPER, DOZER-SPREAD, COMPACTION, WATERING TRUCK	FILL METAL CLEANING PONDS	145,448 00 CY	-	-		9 454	463,157	962 749	1 425,907
		MASS FILL						24,912	1 220,415	2,536,835	3 757,250
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		67 00 AC	144,452	-	-		-	-	144,452
		LANDSCAPING			144,452						144,452
	21 52 00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1,500 00 CY	27,000	-				-	27 000
		DISPOSAL FEE, CONTAMINATED MATERIAL	SLUDGE POND (4 65 ACRES), METAL CLEANING POND (1 88 ACRES)	72,724 00 CY	3 199,856	-				-	3,199,856
		TRANSPORTATION, CONTAMINATED MATERIAL	SLUDGE POND (4 55 ACRES), METAL CLEANING POND (1 88 ACRES)	72 724 00 CY	727,240	-				-	727,240
		WASTE DISPOSAL			3 954 096						3 954,096

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AEP SWEPCO
DOLET HILLS POWER STATION
DEMOLITION ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		CIVIL WORK			4,098,548			36,456	1,776,258	2,735,045	8,609,852

Flint Creek Plant Unit 1

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 19, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/31/20	Comments	G. Amen	B. Andric		All
0	8/19/20	Use	G. Amen	B. Andric	A. Redd	All

TABLE OF CONTENTS

1.0 INTRODUCTION

The Flint Creek Plant located near Gentry, Arkansas in Benton County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of one generating unit with a generating capacity of 558 megawatts. Unit 1 was placed in operation in 1978.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Flint Creek Plant Unit 1 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Flint Creek Plant Unit 1 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24244G was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
22	Concrete Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 13,909,492
Scrap Value	($ 7,342,763)
General Conditions Cost	$ 4,080,200
Indirect Cost	$ 1,799,000
Contingency Cost	$ 2,713,200
Total Project Cost	$ 15,159,129

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Flint Creek Plant Unit 1 generating facility.

The following are excluded from the scope of the conceptual demolition cost estimate:

- Cooling Lake Removal
- Ash Pond Removal
- Wastewater Pond Removal
- Clearwater Pond Removal
- Landfill Leachate Pond Removal
- Asbestos Removal
- Switchyard Demolition and Access Roads to the Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Landfill Leachate building, equipment and foundations

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Flint Creek Plant is a conceptual estimate of the cost to dismantle Flint Creek Plant Unit 1. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A two (2) year demolition schedule is anticipated.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Little Rock Arkansas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Aluminum @ 930 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering. Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All coal and fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Asbestos and PCBs are not present on site.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Ash Ponds and associated Wastewater, Landfill Leachate Pond, Clearwater and Reclaim ponds are not included.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil, mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
1-507000	Rev 2	DFGD-NID & ACI Retrofit Site Plan, General Arrangement
1-507001	Rev 2	DFGD-NID & ACI Retrofit Site Development, General Arrangement

EXHIBIT 1
Flint Creek Plant Unit 1
Conceptual Demolition Cost Estimate No. 24244G

AEP SWEPCO
FLINT CREEK POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20ARLIT
Project No.	A13351.021
Estimate Date	8/19/20
Reviewed By	BA
Approved By	BA
Estimate No.	24244G

Estimate No 24244G
Project No A13351 021
Estimate Date 8/19/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
FLINT CREEK POWER STATION
DEMOLITION COST ESTIMATE

Group	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10 00 00	WHOLE PLANT DEMOLITION	3,100 000			142,972	6,238,124	3,309,962	12,648 087
18 00 00	SCRAP VALUE		(7,342,763)					(7,342,763)
21 00 00	CIVIL WORK	163 852			5,634	259,186	492,607	915 646
22 00 00	CONCRETE			270,180	1,422	57 605	17,974	345 759
	TOTAL DIRECT	3,263,852	(7,342,763)	270,180	150,028	6,554,916	3,820,544	6,566,728

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AEP SWEPCO
FLINT CREEK POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Estimate Totals

Description	Amount	Totals	Hours
Labor	6,554,916		150,028
Material	270,180		
Subcontract	3 263,852		
Construction Equipment	3 820,544		
Scrap Value	(7,342,763)		
	6,566,729	6,566,729	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	393 300		
90-2 Show-up Time	131 100		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6-10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	707,900		
91-2 Field Office Expenses	155,700		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	139,900		
91-6 Temporary Facilities	106,400		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	112,100		
91-9 Legal Expenses/Claims	16,600		
Other Construction Indirects			
92-1 Small Tools & Consumables	70 800		
92-2 Scaffolding			
92-3 General Liability Insur	70,800		
92-4 Constr Equip Mob/Demob	38 200		
92-5 Freight on Material	13 500		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	874,500		
92-9 Contractors Profit	1,249,400		
	4 080,200	10,646,929	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	1,799,000		
93-8 EPC Fee			
	1 799,000	12 445,929	
Contingency			
94-1 Contingency on Const Eq	450,800		
94-3 Contingency on Material	33 200		
94-4 Contingency on Labor	988,600		
94-5 Contingency on Subcontr	326 400		
94-6 Contingency on Scrap	734 300		
94-7 Contingency on Indirect	179,900		
	2 713 200	15 159,129	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		15 159,129	
98 Interest During Constr			
		15,159,129	
Total		**15,159,129**	

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FLINT CREEK POWER STATION
DEMOLITION COST ESTIMATE

Bergman & Lundy

Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10.00 00		WHOLE PLANT DEMOLITION										
	10 21 00	CIVIL WORK										
		FENCING REMAINS IN PLACE			LF	-	-					
		REMOVE RAILROAD TRACK RAIL TIES, SPREAD BALLAST		17 550 00	TF	-	-		3 949	178 878	179 668	358,547
		REMOVE RAILROAD TRACK RAIL, TIES, SPREAD BALLAST	DFGD AND ACI TRACK ADDITIONS	5,650 00	TF	-	-		1,271	57 588	57 842	115,430
		PAVED SURFACES		20,000 00	SY	-	-		2 400	108,720	109,200	217,920
		CIVIL WORK							7,620	345,186	346,710	691,896
	10 22.00	CONCRETE										
		BUILDING/EQUIPMENT FOUNDATION/PAD	TANKS	1 620 00	CY	-	-		1,823	82,869	39 475	122 344
		BUILDING/EQUIPMENT FOUNDATION/PAD	WATER SOFTENER TANKS	200 00	CY	-	-		225	10,231	4,874	15 104
		BUILDING/EQUIPMENT FOUNDATION/PAD	INTAKE STRUCTURE	147 00	CY	-	-		165	7,520	3,582	11,102
		BUILDING/EQUIPMENT FOUNDATION/PAD	MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS	1,750 00	CY	-	-		1 969	89,519	42 643	132,162
		BUILDING/EQUIPMENT FOUNDATION/PAD	FUEL / MATERIAL HANDLING EQUIPMENT	1,765 00	CY	-	-		1 986	90 286	43 009	133,295
		BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS, CURBS, AND BASIN	230 00	CY	-	-		259	11,765	5,605	17,370
		BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE)	9 040 00	CY	-	-		10,170	462 430	220 282	682,712
		BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS, CURBS, AND BASIN	100 00	CY	-	-		113	5 115	2 437	7,552
		BUILDING/EQUIPMENT FOUNDATION/PAD	LIME BLDG, 7758 SF X 33' H	985 00	CY	-	-		1,108	50,386	24,002	74,388
		BUILDING/EQUIPMENT FOUNDATION/PAD	BYPRODUCT EXHAUSTER BLDG, 126'X24 5'X42 H	465 00	CY	-	-		523	23,786	11,331	35 117
		BUILDING/EQUIPMENT FOUNDATION/PAD	AIR COMPRESSOR BLDG, 110'X59'X28'H	660 00	CY	-	-		743	33,761	16 083	49,844
		BUILDING/EQUIPMENT FOUNDATION/PAD	DFDG SWITCHGEAR & CONTROL BLDG, 5580 SF X 20'H	675 00	CY	-	-		759	34,529	16,448	50,977
		BUILDING/EQUIPMENT FOUNDATION/PAD	NEW WAREHOUSE, 140 X12'X25'H	623 00	CY	-	-		701	31 869	15,181	47,050
		BUILDING/EQUIPMENT FOUNDATION/PAD	NEW ID FAN FDNS	800 00	CY	-	-		900	40,923	19,494	60 417
		BUILDING/EQUIPMENT FOUNDATION/PAD	NEW FLUE GAS DUCT SUPPORT FDNS	950 00	CY	-	-		1,069	48,596	23,149	71,745
		BUILDING/EQUIPMENT FOUNDATION/PAD	ACI SILO AND TRUCK UNLOADING FDNS	350 00	CY	-	-		394	17,904	8,529	26 432
		BUILDING/EQUIPMENT FOUNDATION/PAD	ACI BLOWER BLDG, 25'X35'X20 H	49 00	CY	-	-		55	2,507	1 194	3,701
		BUILDING/EQUIPMENT FOUNDATION/PAD	LIME SILO CONCRETE	1,185 00	CY	-	-		1,333	60 617	28,875	89,493
		BUILDING/EQUIPMENT FOUNDATION/PAD	BYPRODUCT HANDLING SYSTEM SILO FDN	490 00	CY	-	-		551	25,065	11,940	37,005
		BUILDING/EQUIPMENT FOUNDATION/PAD	PIPE & UTILITY RACKS	140 00	CY	-	-		158	7,162	3,411	10 573
		BUILDING/EQUIPMENT FOUNDATION/PAD	RECLAIM WATER STORAGE BASIN	960 00	CY	-	-		1,080	49 108	23 393	72,500
		BUILDING/EQUIPMENT FOUNDATION/PAD	MISC FDNS FOR DFDG AND ACI UPGRADE	250 00	CY	-	-		281	12,788	6,092	18 880
		BUILDING/EQUIPMENT FOUNDATION/PAD	LANDFILL LEACHATE TREATMENT BUILDING	56 00	CY	-	-		63	2,865	1,365	4,229
		BUILDING/EQUIPMENT FOUNDATION/PAD	LANDFILL LEACHATE TREATMENT OUTDOOR AREA	120 00	CY	-	-		135	6,138	2,924	9,063
		MAIN POWER BLOCK FOUNDATION	BOILER BUILDING, MATERIAL HANDLING	3,907 00	CY	-	-		3 298	149 938	71 424	221,362
		MAIN POWER BLOCK FOUNDATION	DFDG PROCESS ISLAND BLDG	5,600 00	CY	-	-		4 726	214,909	102 374	317 283
		ELEVATED CONCRETE FLOOR / ROOF		1,080 00	CY	-	-		647	29 415	14,012	43 428
		TURBINE PEDESTAL		2,300 00	CY	-	-		4,140	188,246	89 672	277,918
		DISCHARGE OUTFALL STRUCTURE		1,165 00	CY	-	-		874	39 729	18,925	58 655
		CURBS		2,000 00	LF	-	-		24	1 091	520	1,611
		WALKWAYS		120 00	CY	-	-		63	2 865	1,365	4 229
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	32 260 00	SF	-	-		484	21,413	15 175	36,588
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, MACHINE SHOP, WATER TREATMENT AREAS	20,480 00	SF	-	-		307	13,594	9 634	23,227
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM MISC	1 377 00	SF	-	-		21	914	648	1,562
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	DFDG PROCESS ISLAND BLDG	10,906 00	SF	-	-		164	7,239	5,130	12,369
		CONCRETE							41,308	1 877,093	904,196	2,781,289
	10,23 00	STEEL										
		STRUCTURAL, GIRT AND GALLERY STEEL		5,590 00	TN	-	-		5,679	248,816	91,780	340,596

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FLINT CREEK POWER STATION
DEMOLITION COST ESTIMATE

Bargent & Lundy

Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 23 00	STEEL										
		STRUCTURAL, GIRT AND GALLERY STEEL	DFDG PROCESS ISLAND BLDG ENCLOSURES AND FRAMING	286 00	TN	-	-		291	12,730	4,696	17,426
		STRUCTURAL, GIRT AND GALLERY STEEL	BYPRODUCT EXHAUSTER BLDG, 126'X24 5'X42 H	172 00	TN	-	-		175	7,656	2 824	10 480
		STRUCTURAL GIRT AND GALLERY STEEL	PIPE AND UTILITY RACKS	164 00	TN	-	-		167	7,300	2 693	9 992
		STRUCTURAL GIRT AND GALLERY STEEL	STEEL SUPPORTS FOR NEW DUCKWORK FOR DFDG MODS	840 00	TN	-	-		853	37,389	13 792	51 181
		LOAD CHIMNEY LINER STEEL PLATE PIECES ALREADY CUT BY DEMOLITION CONTRACTOR INTO CONTAINER		144 00	TN	-	-		72	3,154	1 164	4,318
		STEEL							7,237	317 046	116 947	433,993
	10 24 00	ARCHITECTURAL										
		BUILDING	WAREHOUSES AND STORE ROOMS	260 800 00	CF	-	-		782	33 455	21,375	54,831
		BUILDING	ADMINISTRATION	318 600 00	CF	-	-		956	40,870	26,112	66,982
		BUILDING	TRACTOR MAINTENANCE	113,400 00	CF	-	-		340	14,547	9 294	23,841
		BUILDING	PRECIPITATOR ELECTRICAL BUILDING	86 400 00	CF	-	-		259	11,083	7,081	18,165
		BUILDING	COAL YARD MAINTENANCE	44,800 00	CF	-	-		134	5,747	3 672	9 419
		BUILDING	CAR DUMPER	120,400 00	CF	-	-		361	15,445	9 868	25 313
		BUILDING	MISCELLANEOUS SMALL BUILDINGS	20,000 00	CF	-	-		60	2 566	1 639	4,205
		BUILDING	LIME BLDG, 7758 SF X 33' H	256 014 00	CF	-	-		768	32,841	20,983	53,824
		BUILDING	BYPRODUCT EXHAUSTER BLDG, 126'X24 5'X42'H	129 654 00	CF	-	-		389	16,632	10,626	27,258
		BUILDING	AIR COMPRESSOR BLDG, 110'X59'X28'H	181,720 00	CF	-	-		545	23 311	14 894	38,205
		BUILDING	DFDG SWITCHGEAR & CONTROL BLDG 5580 SF X 20'H	111,600 00	CF	-	-		335	14 316	9 147	23 463
		BUILDING	ACI BLOWER BLDG, 25'X35 X20'H	17,500 00	CF	-	-		53	2 245	1,434	3,679
		BUILDING	NEW WAREHOUSE, 140'X12'X25'H	420,000 00	CF	-	-		1,260	53,878	34 423	88 301
		BUILDING	LANDFILL LEACHATE TREATMENT BUILDING	30,080 00	CF	-	-		90	3,859	2 465	6 324
		BUILDING	CRUSHER HOUSE	96,000 00	CF	-	-		480	21,029	7 757	28,786
		METAL SIDING		14,120 00	SF	-	-		85	3,749	2,657	6,406
		MASONRY WALLS		2 203 00	SF	-	-		18	754	481	1,235
		ARCHITECTURAL							6,915	296,326	183 910	480,236
	10 25 00	CONCRETE CHIMNEY & STACK										
		CONCRETE CHIMNEY STEEL LINER, DEMOLITION TOP-TO-BOTTOM, PIECE-MEAL, NON-EXPLOSIVE METHOD	540 FT TALL	1 00	LS	3,100,000	-					3 100,000
		CONCRETE CHIMNEY & STACK				3,100,000						3,100,000
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM										
		ELEVATOR		1 00	EA	-	-		150	6,191	3 366	9 557
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00	LT	-	-		2 000	82 540	44 880	127,420
		MISCELLANEOUS STRUCTURAL ITEM							2,150	88,731	48,246	136,977
	10 31 00	MECHANICAL EQUIPMENT										
		MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		10,000 00	TN	-	-		20 250	887,153	435,983	1,323,135
		STEAM TURBINE GENERATOR		1,150 00	TN	-	-		2 329	96,108	52 257	148,365
		FLUES AND DUCTS	NEW DUCTWORK FOR DFGD MODS	1,525 00	TN	-	-		4,118	180,388	88 650	269,037
		FLUES AND DUCTS INCL BREACHING		2 000 00	TN	-	-		5,400	236,574	116 262	352,836
		PRECIPITATOR		5,500 00	TN	-	-		11,138	487,934	239 790	727 724
		ASH HANDLING		100 00	TN	-	-		270	11,143	6,059	17,202
		CONVEYORS, TRUSSES, BENTS, EQUIPMENT		70 00	TN	-	-		189	7,800	4,241	12 041
		CONVEYORS, TRUSSES BENTS, EQUIPMENT, RECLAIM EQUIPMENT		1,391 00	TN	-	-		3,756	154 998	84 278	239,276
		FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00	TN	-	-		304	12,536	6 816	19,352
		FLY ASH SILO		100 00	TN	-	-		270	11 143	6,059	17,202
		MISCELLANEOUS SMALL TANKS		52 00	TN	-	-		140	5,794	3,151	8,945
		MISCELLANEOUS STORAGE TANKS AND PUMPS		1,230 00	TN	-	-		3,321	137,058	74,523	211,581
		FUEL OIL STORAGE TANK		110 00	TN	-	-		297	12,257	6,665	18,922
		TANKS AND SILOS	ACI SILO AND EQUIPMENT	50 00	TN	-	-		135	5 571	3,029	8 601

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DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 31 00	MECHANICAL EQUIPMENT									
		TANKS AND SILOS	LIME SILO EQUIPMENT AND STAIR TOWER	57 00 TN	-	-		154	6 351	3,454	9,805
		WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		250 00 TN	-	-		506	20,893	11,360	32,253
		MISCELLANEOUS EQUIPMENT		540 00 TN	-	-		1,094	45 129	24 538	69,667
		TURBINE ROOM OH CRANE, 70/20 TON		1 00 LS	-	-		267	11 697	4 315	16,012
		FUEL OIL EQUIPMENT		70 00 TN	-	-		142	5,850	3 181	9 031
		MISCELLANEOUS EQUIPMENT	DFGD UPGRADE	50 00 TN	-	-		101	4,179	2,272	6,451
		MISCELLANEOUS EQUIPMENT	DFGD ABSORBER SYSTEM FF NID REACTOR	3 140 00 TN	-	-		6,359	262,415	142 685	405,100
		MISCELLANEOUS EQUIPMENT	BYPRODUCT HANDLING SYSTEM INCL SILO AND PIPING	204 00 TN	-	-		413	17,049	9 270	26 319
		MISCELLANEOUS EQUIPMENT	PLANT AIR & INSTRUMENT AIR SYSTEM EXTENSIONS	39 00 TN	-	-		79	3,259	1 772	5,032
		MISCELLANEOUS EQUIPMENT	SERVICE WATER UPGRADES	22 00 TN	-	-		45	1,839	1,000	2,838
		MISCELLANEOUS EQUIPMENT	LANDFILL LEACHATE TREATMENT	100 00 TN	-	-		203	8,357	4,544	12 901
		MISCELLANEOUS EQUIPMENT	NEW ROAD TRUCK SCALE FOR DFGD UPGRADE	6 00 TN	-	-		16	669	364	1,032
		MISCELLANEOUS EQUIPMENT	2 PDC NID-ACI VFD BLDGS	10 00 TN	-	-		27	1,114	606	1,720
		MISCELLANEOUS EQUIPMENT	CEMS EQUIPMENT BLDG	13 00 TN	-	-		35	1,449	788	2,236
		MISCELLANEOUS EQUIPMENT	FLY ASH SYSTEM UPGRADES INCL BLENDING BIN	26 00 TN	-	-		70	2,897	1,575	4,472
		CONDENSER		410 00 TN	-	-		830	34,264	18,631	52 895
		CIRCULATING WATER SYSTEM EQUIPMENT		350 00 TN	-	-		709	29,250	15,904	45,154
		FRP TANKS, 7 EACH	LANDFILL LEACHATE TREATMENT	1 00 LT	-	-		100	4,127	2,244	6,371
		MECHANICAL EQUIPMENT						63,064	2,707,244	1,376,264	4,083 508
	10 34 00	HVAC									
		MAIN BUILDING HVAC		1 00 LT	-	-		1,500	61,905	33 660	95,565
		HVAC						1 500	61,905	33,660	95,565
	10 35 00	PIPING									
		PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	1,600 00 TN	-	-		3 240	133 715	72 706	206,420
		CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	33 119	18 008	51,127
		PIPING, VALVES AND HANGERS	BOP	167 00 TN	-	-		338	13 956	7,589	21 545
		HYDRANTS		1 00 LS	-	-		188	8,494	8,531	17,025
		PIPING						4,568	189 284	106,834	296,118
	10 41 00	ELECTRICAL EQUIPMENT									
		TRANSFORMERS	MPT AND AUXILIARY TRANSFORMER	308 00 TN	-	-		823	33 964	18 468	52 432
		LIGHT FIXTURE		1,000 00 EA	-	-		400	16 508	8,976	25 484
		OUTDOOR LIGHT POLE / FIXTURE		180 00 EA	-	-		270	11,143	6,059	17,202
		ISO PHASE BUS DUCT		31 00 TN	-	-		83	3,418	1,859	5 277
		MISCELLANEOUS ELECTRICAL EQUIPMENT		397 00 TN	-	-		1,061	43,779	23 804	67,583
		MISCELLANEOUS ELECTRICAL EQUIPMENT	DFGD MODS	60 00 TN	-	-		160	6,616	3 598	10,214
		ELECTRICAL EQUIPMENT						2,797	115,429	62,763	178,191
	10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
		CONDUIT		204 00 TN	-	-		1,326	54,724	29,755	84,479
		ALUMINUM CONDUIT	DFGD MODS	25 00 TN	-	-		163	6,706	3 647	10,353
		CABLE TRAY		204 00 TN	-	-		1,224	50 514	27 467	77,981
		ALUMINUM CABLE TRAY	DFGD MODS	25 00 TN	-	-		150	6 191	3,366	9,557
		RACEWAY, CABLE TRAY, & CONDUIT						2,863	118,135	64,235	182,370
	10 43 00	CABLE									
		COPPER WIRE		195 00 TN	-	-		1,950	80 477	43 758	124 235
		COPPER WIRE	DFGD MODS	100 00 TN	-	-		1,000	41,270	22,440	63,710
		CABLE						2 950	121,747	66,198	187,945
		WHOLE PLANT DEMOLITION			**3,100,000**			**142,972**	**6,238,124**	**3,309,962**	**12,648,087**
18.00.00		**SCRAP VALUE**									
	18 10 00	MIXED STEEL									

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FLINT CREEK POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	18 10.00	MIXED STEEL									
		CARBON STEEL		-34 125 00 TN	-	(5 664,750)	-				(5,664 750)
		CARBON STEEL		-4 807 00 TN	-	(797,962)	-				(797 962)
		CARBON STEEL	RAILROAD RAIL	-851 00 TN	-	(141,266)	-				(141,266)
		MIXED STEEL				(6,603,978)					(6,603,978)
	18 30 00	COPPER									
		#1 INSULATED COPPER WIRE 65%		-295 00 TN	-	(663,455)	-				(663,455)
		COPPER				(663,455)					(663,455)
	18 50 00	ALUMINUM									
		ALUMINUM	DFGD MODS	-50 00 TN	-	(46,500)	-		-	-	(46,500)
		ALUMINUM	ISO PHASE BUS, ENCLOSURE AND CONDUCTOR	-31 00 TN	-	(28,830)	-		-	-	(28,830)
		ALUMINUM				(75,330)					(75,330)
		SCRAP VALUE				**(7,342,763)**					**(7,342,763)**
21.00.00		**CIVIL WORK**									
	21 17 00	EARTHWORK, EXCAVATION									
		EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE		3 455 00 CY	-	-		518	24 954	8 898	33 852
		MASS EXCAVATION	LEVEL BERMS AND DIKES	5,000 00 CY	-	-		200	9,158	18 912	28,070
		EARTHWORK EXCAVATION						718	34,112	27,810	61,922
	21 21 00	MASS FILL									
		CUT & FILL, CLAY, 1500 FT HAUL, 14 CY SCRAPER, DOZER-SPREAD, COMPACTION, WATERING TRUCK	COVER DISTURBED AREAS OF SITE WITH 2 FT OF SOIL	75 621 00 CY	-	-		4,915	225,075	464,797	689,871
		MASS FILL						4,915	225,075	464,797	689,871
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		32 00 AC	68,992	-	-		-	-	68,992
		LANDSCAPING			68,992						68,992
	21 52 00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1 500 00 CY	27,000	-				-	27,000
		DISPOSAL AND TRANSPORTATION FEE	CONTAMINATED SOIL	2 262 00 CY	67,860	-				-	67,860
		WASTE DISPOSAL			94,860						94,860
		CIVIL WORK			**163,852**			**5,634**	**259,186**	**492,607**	**915,646**
22 00 00		**CONCRETE**									
	22 13.00	CONCRETE									
		FLOWABLE FILL, 1500 PSI	INTAKE CLOSURE	2,374 00 CY	-	-	225,530	1,187	48,085	15,004	288,619
		FLOWABLE FILL 1500 PSI	DISCHARGE CLOSURE	470 00 CY	-	-	44,650	235	9,520	2,970	57,140
		CONCRETE					270,180	1 422	57,605	17 974	345 759
		CONCRETE					**270,180**	**1,422**	**57,605**	**17,974**	**345,759**

J.L. Stall Plant Unit 6

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 17, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/16/20	Comments	G. Amen	B. Andric		All
0	8/17/20	Use	G. Amen	B. Andric	A. Redd	All

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1.0 INTRODUCTION

The J. L. Stall Plant located near Shreveport, Louisiana in Caddo County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of two (2) gas fired combined cycle generating units and one (1) steam turbine generating unit, with a total generating capacity of 540 megawatts. Facility was placed in operation in 2010.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for J.L. Stall Plant Unit 6 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for J.L. Stall Plant Unit 6 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 31568D, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
22	Concrete Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 3,962,937
Scrap Value	($ 2,858,316)
General Conditions Cost	$ 1,416,300
Indirect Cost	$ 537,900
Contingency Cost	$ 877,600
Total Project Cost	$ 3,936,421

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete J.L. Stall Plant Unit 6 generating facility.

The following are excluded from the scope of the conceptual demolition cost estimate:

- Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Emergency diesel generator and foundation was added.
- Spare Generator Startup Transformer and foundation was added.

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the J.L. Stall Plant is a conceptual estimate of the cost to dismantle J.L. Stall Plant Unit 6. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap metal value, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Shreveport, Louisiana as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Aluminum @ 930 $/ton
- Titanium @ 11,000 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Asbestos and PCB's are not present on site.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- There are no switchyards within the plant boundaries.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed, recycled and/or buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be purchased from nearby (10 mile round trip) offsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
S6-0018	Rev. 6	Foundations Location Plan
S6-0025	Rev. 6	CT Foundation & Embedment Plan Units 6A & 6B
S6-0026	Rev. 0	CT Units 6A & 6B Foundation Sections and Details
S6-0033	Rev. 4	Heat Recovery Steam Generator Foundation Plan Units 6A & 6B
S6-0045	Rev. 4	Steam Turbine Generator Foundation Bottom Plan
S6-0046	Rev. 3	Steam Turbine Generator Foundation Top Plan
S6-0068	Rev. 6	Transformer Foundation Plan Unit 6A, 6B, and 6S
S6-0095	Rev. 3	Cooling Tower Basin Foundation Plan Sheet 1
S6-0096	Rev. 8A	Cooling Tower Basin Foundation Plan Sheet 2
S6-0097	Rev. 4	Cooling Tower Pump Basin Section and Details
S6-0110	Rev. 11	Pipe Rack Foundation Plan
S6-0111	Rev. 11	Pipe Rack Foundation Plan
M6-0002	Rev. 0	General Arrangement J L Stall Site
27414-F01	Rev.0	General Arrangement of Steam Surface Condenser
E6-1000	Rev. 3	Electrical One Line Diagram

EXHIBIT 1
J.L. Stall Plant Unit 6
Conceptual Demolition Cost Estimate No. 31568D

AEP SWEPCO
J. L. STALL POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20LASHR
Project No.	A13351.021
Estimate Date	8/17/20
Reviewed By	BA
Approved By	BA
Estimate No.	31568D

Estimate No 31568D
Project No A13351 021
Estimate Date 8/17/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
J. L. STALL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10 00 00	WHOLE PLANT DEMOLITION				45,391	2,004,093	1 033,215	3,037 308
18 00 00	SCRAP VALUE		(2 858,316)					(2,858.316)
21.00 00	CIVIL WORK	41,473		736,242	1,040	50 894	94,552	923 161
22 00 00	CONCRETE			1,330	21	873	265	2,468
	TOTAL DIRECT	**41,473**	**(2,858,316)**	**737,572**	**46,452**	**2,055,859**	**1,128,033**	**1,104,621**

Estimate No 31568D
Project No A13351 021
Estimate Date 8/17/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
J L STALL POWER STATION
DEMOLITION COST ESTIMATE

Bechtel Lundy

Estimate Totals

Description	Amount	Totals	Hours
Labor	2,055 859		46,452
Material	737,572		
Subcontract	41,473		
Construction Equipment	1,128 033		
Scrap Value	(2,858,316)		
	1,104,621	1 104,621	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	123 400		
90-2 Show-up Time	41,100		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6-10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	222 000		
91-2 Field Office Expenses	48 800		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	43,900		
91-6 Temporary Facilities	33 400		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	35,200		
91-9 Legal Expenses/Claims	5,200		
Other Construction Indirects			
92-1 Small Tools & Consumables	22 200		
92-2 Scaffolding			
92-3 General Liability Insur	22 200		
92-4 Constr Equip Mob/Demob	11,300		
92-5 Freight on Material	36 900		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	317,400		
92-9 Contractors Profit	453,300		
	1,416,300	2 520,921	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	537,900		
93-8 EPC Fee			
	537,900	3 058,821	
Contingency			
94-1 Contingency on Const Eq	133 100		
94-3 Contingency on Material	90,600		
94-4 Contingency on Labor	310 100		
94-5 Contingency on Subcontr	4,200		
94-6 Contingency on Scrap	285 800		
94-7 Contingency on Indirect	53,800		
	877 600	3 936,421	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		3 936 421	
98 Interest During Constr			
		3 936,421	
Total		**3,936,421**	

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AEP SWEPCO
J L STALL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10.00.00		**WHOLE PLANT DEMOLITION**									
	10 21 00	CIVIL WORK									
		FENCING REMAINS IN PLACE		LF	-	-					
		PAVED SURFACES		9,335 00 SY	-	-		1,120	53,456	50,969	104,425
		CIVIL WORK						1,120	53 456	50,969	104,425
	10 22 00	CONCRETE									
		BUILDING/EQUIPMENT FOUNDATION/PAD	HRSG UNIT 6A	782 00 CY	-	-		880	42 219	19 055	61,275
		BUILDING/EQUIPMENT FOUNDATION/PAD	HRSG UNIT 6B	782 00 CY	-	-		880	42,219	19,055	61,275
		BUILDING/EQUIPMENT FOUNDATION/PAD	COOLING TOWER FDN	2 225 00 CY	-	-		2 503	120,125	54 218	174,343
		BUILDING/EQUIPMENT FOUNDATION/PAD	AQUEOUS AMMONIA STORAGE TANK	55 00 CY	-	-		62	2 969	1,340	4,310
		BUILDING/EQUIPMENT FOUNDATION/PAD	PIPE RACK UNIT 6A	246 00 CY	-	-		277	13,281	5,994	19,276
		BUILDING/EQUIPMENT FOUNDATION/PAD	PIPE RACK UNIT 6B	619 00 CY	-	-		696	33 419	15 083	48 503
		BUILDING/EQUIPMENT FOUNDATION/PAD	WATER TREATMENT BUILDING	796 00 CY	-	-		896	42,975	19,397	62 372
		BUILDING/EQUIPMENT FOUNDATION/PAD	BOP AND MISCELLANEOUS FOUNDATIONS	1 000 00 CY	-	-		1,125	53,989	24,368	78,356
		BUILDING/EQUIPMENT FOUNDATION/PAD	WATER TREATMENT BUILDING ADDITION	267 00 CY	-	-		300	14,415	6 506	20 921
		BUILDING/EQUIPMENT FOUNDATION/PAD	GSU AND UAT, UNIT 6A	206 00 CY	-	-		232	11 122	5 020	16 141
		BUILDING/EQUIPMENT FOUNDATION/PAD	GSU AND UAT, UNIT 6B	189 00 CY	-	-		213	10 204	4 605	14 809
		BUILDING/EQUIPMENT FOUNDATION/PAD	GSU, UNIT 6S	123 00 CY	-	-		138	6,641	2,997	9,638
		BUILDING/EQUIPMENT FOUNDATION/PAD	CATERPILLAR DIESEL GENERATOR, 3516B V12, 2 MW	35 00 CY	-	-		39	1 890	853	2,742
		BUILDING/EQUIPMENT FOUNDATION/PAD	SPARE GSU, GE PROLEC 250 MVA 138/15-18 KV	206 00 CY	-	-		232	11,122	5 020	16,141
		TURBINE PEDESTAL	CT UNIT 6A	1,507 00 CY	-	-		2,713	130,178	58,755	188,933
		TURBINE PEDESTAL	CT UNIT 6B	1,507 00 CY	-	-		2,713	130,178	58,755	188,933
		TURBINE PEDESTAL	STEAM TURBINE 6S	1,443 00 CY	-	-		2,597	124,649	56,260	180,909
		CONCRETE						16,495	791,594	357 281	1,148 875
	10 23 00	STEEL									
		STRUCTURAL GIRT AND GALLERY STEEL	PIPE RACK UNIT 6A	120 00 TN	-	-		122	5,544	1,970	7,514
		STRUCTURAL, GIRT AND GALLERY STEEL	PIPE RACK UNIT 6B	85 00 TN	-	-		86	3,927	1,396	5,322
		STRUCTURAL, GIRT AND GALLERY STEEL	GALLERIES	20 00 TN	-	-		41	1,848	657	2,505
		STRUCTURAL GIRT AND GALLERY STEEL	PIPE SUPPORTS MISCELLANEOUS BRACING, ETC	40 00 TN	-	-		81	3,696	1,313	5,009
		STEEL						330	15,014	5,336	20,350
	10 24 00	ARCHITECTURAL									
		BUILDING	86'X125'X12' HIGH STEEL BUILDING, WATER TREATMENT BUILDING	129 000 00 CF	-	-		387	16,978	10,573	27,551
		BUILDING	32'X48'X12' HIGH STEEL BUILDING SAMPLE PANEL AND CHEMICAL FEED BUILDING	18 432 00 CF	-	-		55	2 426	1,511	3,937
		BUILDING	40'X90'X30' HIGH WATER TREATMENT BUILDING EXTENTION	108 000 00 CF	-	-		324	14,214	8,852	23 066
		ARCHITECTURAL						766	33 617	20,935	54,553
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		1,000	41,620	22,440	64,060
		MISCELLANEOUS STRUCTURAL ITEM						1,000	41,620	22,440	64,060
	10 31 00	MECHANICAL EQUIPMENT									
		COMBUSTION TURBINE	Unit 6A - SIEMENS (W501FD) STG6 - 5000F	213 00 TN	-	-		746	31,028	16,729	47,757
		COMBUSTION TURBINE	Unit 6B - SIEMENS (W501FD) STG6 - 5000F	213 00 TN	-	-		746	31,028	16,729	47,757
		HEAT RECOVERY STEAM GENERATOR	UNIT 6A, 3 PRESSURE HRSG WITH REHEAT, INTERAL DEAERATOR, SCR, STACK	2,156 00 TN	-	-		7,546	314,065	169 332	483,397
		HEAT RECOVERY STEAM GENERATOR	UNIT 6B 3 PRESSURE HRSG WITH REHEAT INTERAL DEAERATOR, SCR, STACK	2,156 00 TN	-	-		7,546	314,065	169,332	483,397
		STEAM TURBINE GENERATOR	Unit 6S - GE D-11, 244 MW CONDENSEING REHEAT TURBINE	465 00 TN	-	-		942	39,190	21,130	60,321
		CT INLET CHILLER	UNIT 6A	220 00 TN	-	-		446	18,542	9,997	28 539
		CT INLET CHILLER	UNIT 6B	220 00 TN	-	-		446	18,542	9,997	28 539
		COMPRESSOR	2 @ 1335 SCFM	9 00 TN	-	-		18	759	409	1 167

Estimate No 31568D
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AEP SWEPCO
J. L. STALL POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 31 00	MECHANICAL EQUIPMENT									
		TANKS AND SILOS	DEMIN WATER STORAGE TANK 400 000 GAL, 46' DIA X 34 HIGH	48 00 TN	-	-		130	5 394	2 908	8 302
		TANKS AND SILOS	RAW/FIRE WATER STORAGE TANK 375 000 GAL, 44' DIA X 34' HIGH	45 00 TN	-	-		122	5 057	2 726	7,783
		TANKS AND SILOS	AQUEOUS AMMONIA STORAGE TANK 15 000 GAL	5 00 TN	-	-		14	562	303	865
		TANKS AND SILOS	CONDENSATE COLLECTION TANK, 10 000 GAL	4 00 TN	-	-		11	450	242	692
		MISCELLANEOUS EQUIPMENT	WATER TREATMENT EQUIPMENT	30 00 TN	-	-		61	2,528	1,363	3,892
		MISCELLANEOUS EQUIPMENT	UNIT 6A, CT LUBE OIL SYSTEM, FIN FAN COOLER	4 00 TN	-	-		11	450	242	692
		MISCELLANEOUS EQUIPMENT	UNIT 6B, CT LUBE OIL SYSTEM, FIN FAN COOLER	4 00 TN	-	-		11	450	242	692
		MISCELLANEOUS EQUIPMENT	PUMPS	25 00 TN	-	-		68	2 809	1,515	4 324
		MISCELLANEOUS EQUIPMENT	FUEL GAS PREHEATER TUBE AND SHELL HEAT EXCHANGER, 2 EACH	1 00 TN	-	-		3	112	61	173
		MISCELLANEOUS EQUIPMENT	CATERPILLAR DIESEL GENERATOR, 3516B V12, 2 MW	16 00 TN	-	-		43	1,798	969	2,767
		CONDENSER	SHELL, UNIT 6S	200 00 TN	-	-		405	16,856	9 088	25,944
		CONDENSER	TUBES UNIT 6S	132 00 TN	-	-		267	11 125	5,998	17,123
		COOLING TOWER		1,151,820 00 CF	-	-		2,304	95,878	51,694	147,571
		MECHANICAL EQUIPMENT						21,881	910,685	491,008	1,401,693
	10 35 00	PIPING									
		PIPING VALVES AND HANGERS	UNIT 6A, 14,000 LF	272 00 TN	-	-		551	22,924	12,360	35 284
		PIPING VALVES AND HANGERS	UNIT 6B, 14 000 LF	293 00 TN	-	-		593	24 694	13 314	38 008
		HYDRANTS		1 00 LT	-	-		60	2,497	1,346	3,844
		PIPING						1 204	50 116	27,021	77,136
	10 41 00	ELECTRICAL EQUIPMENT									
		TRANSFORMERS	GSU UNIT 6A	135 00 TN	-	-		361	15 013	8,095	23,108
		TRANSFORMERS	GSU, UNIT 6B	135 00 TN	-	-		361	15 013	8 095	23,108
		TRANSFORMERS	GSU, UNIT 6S	135 00 TN	-	-		361	15,013	8,095	23,108
		TRANSFORMERS	UAT	10 00 TN	-	-		27	1 112	600	1,712
		TRANSFORMERS	SPARE GSU, GE PROLEC, 250 MVA 138/15-18 KV	133 00 TN	-	-		355	14 791	7,975	22 765
		OUTDOOR LIGHT POLE / FIXTURE		1 00 LT	-	-		150	6 243	3,366	9,609
		MISCELLANEOUS ELECTRICAL EQUIPMENT		18 00 TN	-	-		64	2,669	1,439	4,108
		ELECTRICAL EQUIPMENT						1 678	69 855	37,663	107 518
	10 42 00	RACEWAY CABLE TRAY, & CONDUIT									
		CONDUIT	UNIT 6A	25 90 TN	-	-		168	7,007	3,778	10,785
		CONDUIT	UNIT 6B	25 90 TN	-	-		168	7,007	3,778	10,785
		CABLE TRAY	UNIT 6A	3 30 TN	-	-		20	824	444	1 268
		CABLE TRAY	UNIT 6B	3 30 TN	-	-		20	824	444	1,268
		RACEWAY CABLE TRAY, & CONDUIT						376	15 662	8 444	24,106
	10 43 00	CABLE									
		COPPER WIRE / CABLE		54 00 TN	-	-		540	22,475	12,118	34,592
		CABLE						540	22 475	12 118	34,592
		WHOLE PLANT DEMOLITION						**45,391**	**2,004,093**	**1,033,215**	**3,037,308**
18.00.00		**SCRAP VALUE**									
	18 10 00	CARBON STEEL									
		CARBON STEEL		-7,413 00 TN	-	(1,230,558)	-			-	(1,230,558)
		CARBON STEEL				(1 230,558)					(1,230,558)
	18 30 00	COPPER									
		#1 INSULATED COPPER WIRE 65%		-54 00 TN	-	(121,446)	-				(121,446)
		COPPER				(121,446)					(121,446)
	18 50 00	ALUMINUM									
		ALUMINUM	CONDUIT	-51 80 TN	-	(48 174)	-		-	-	(48,174)
		ALUMINUM	TRAY	-6 60 TN	-	(6,138)	-		-	-	(6,138)
		ALUMINUM				(54 312)					(54,312)
	18 99 00	SCRAP VALUE, MISCELLANEOUS									

Estimate No 31568D
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/Appr GA/BA/BA

AEP SWEPCO
J. L. STALL POWER STATION
DEMOLITION COST ESTIMATE

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	18 99 00	SCRAP VALUE MISCELLANEOUS									
		TITANIUM	CONDENSER TUBES	-132 00 TN	-	(1,452,000)				-	(1 452 000)
		SCRAP VALUE, MISCELLANEOUS				(1,452,000)					(1,452,000)
		SCRAP VALUE				**(2,858,316)**					**(2,858,316)**
21.00.00		**CIVIL WORK**									
	21 20 00	BACKFILL									
		BACKFILL	BACKFILL INTAKE STRUCTURE WITH CONCRETE DEBRIS	324 00 CY	-	-		49	2 340	834	3 175
		BACKFILL						49	2 340	834	3,175
	21 21 00	MASS FILL									
		MASS FILL, COMMON EARTH USING DUMP TRUCK, 10 MI ROUND TRIP	COVER DISTURBED AREAS OF SITE AND PONDS WITH 2FT OF SOIL	28,317 00 CY	-	-	736 242	991	48 554	93 718	878 514
		MASS FILL					736,242	991	48 554	93 718	878 514
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		8 80 AC	18 973	-	-		-	-	18 973
		LANDSCAPING			18 973						18,973
	21 52 00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1,250 00 CY	22,500	-				-	22 500
		WASTE DISPOSAL			22 500						22 500
		CIVIL WORK			**41,473**		**736,242**	**1,040**	**50,894**	**94,552**	**923,161**
22.00.00		**CONCRETE**									
	22.13.00	CONCRETE									
		FLOWABLE FILL, 1500 PSI	INTAKE STRUCTURE CAP, 2' TOP CAP	14 00 CY	-	-	1,330	21	873	265	2,468
		CONCRETE					1 330	21	873	265	2,468
		CONCRETE					**1,330**	**21**	**873**	**265**	**2,468**

Knox Lee Plant Units 1- 5

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company(Owner)
and American Electric Power

Project No. A13351.021
August 17, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/6/20	Comments	G. Amen	B. Andric		All
0	8/17/20	Use	G. Amen	B. Andric	A. Redd	All

TABLE OF CONTENTS

1.0 INTRODUCTION

The Knox Lee Plant located near Longview, Texas in Gregg County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of five gas/oil fired generating units with a total generating capacity of 501 megawatts. The Units were placed in operation as follows:

Unit 1	1950 (Retired In-place)
Unit 2	1950 (Retired In-place)
Unit 3	1952 (Retired In-place)
Unit 4	1956 (Retired In-place)
Unit 5	1974

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Knox Lee Plant Units 1-5 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Knox Lee Plant Units 1-5 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24262F was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
22	Concrete Work Costs
90, 91, 92	General Condition Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 15,442,642
Scrap Value	($ 7,173,345)
General Conditions Cost	$ 4,852,400
Indirect Cost	$ 2,029,500
Contingency Cost	$ 2,949,800
Total Project Cost	$ 18,100,997

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Knox Lee Plant Units 1-5 generating facility and plant common services associated with the unit. Common facilities include:

- Various Storerooms and Buildings
- Intake and Discharge Structures
- Fuel Oil Equipment and Tanks
- Water Treating House and Equipment

The following are excluded from the scope of the conceptual demolition cost estimate:

- Asbestos Removal
- Switchyard
- Demolished Small Tanks (Since the 2012 cost estimate)
- Demolished Small Buildings (Since the 2012 cost estimate)

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- None

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Knox Lee Plant is a conceptual estimate of the cost to dismantle Knox Lee Plant Units 1-5. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work). All units will be demolished at the same time.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Dallas Texas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material

- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Mixed Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Stainless Steel @ 830 $/ton
- Aluminum @ 930 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.

- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- PCB's are not present on site.
- Emergency or Black Start Diesels are not included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- The existing Cooling Lake is to be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be purchased from nearby (10 mile round trip) offsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision	Title
M-290		Mezzanine & Main Floor Loading Diagram, Unit 5
M-291		Grade Floor Loading Diagram, Unit 5
M-300		Site Plan, Knox Lee Power Plant
M-301	Rev A	Property Plat, Knox Lee Power Plant
M-302		Development Plan, Knox Lee Power Plant
M-303		General Arrangement, Main Floor Plan – Unit 1,2,3,4 & 5
M-304		General Arrangement, Unit 5 Turb Rm. Mezz. Flr & BLR Grade Flr.
M-305		General Arrangement, Basement Floor – Unit 1,2,3,4&5
M-306		General Arrangement, Misc. Plans Unit 1,2,3,4,&5
M-307		General Arrangement, Cross Section Unit 5
M-308		General Arrangement, Cross Section Unit 5
M-309		General Arrangement, Cross Section Unit 5
M-310		General Arrangement, Longitudinal Section Unit 5
M-311		General Arrangement, Longitudinal Section Unit 1,2,3,4&5
M-366		Turbine and Generator Dismantling Layout Unit 5

EXHIBIT 1
Knox Lee Plant Units 1-5
Conceptual Demolition Cost Estimate No. 24262F

AEP SWEPCO KNOX LEE POWER STATION
KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20TXDAL
Project No.	A13351 021
Estimate Date	8/17/20
Reviewed By	BA
Approved By	BA
Estimate No.	24262F

Estimate No 24262F
Project No A13351 021
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Prep/Rev/App GA/BA/BA

AEP SWEPCO KNOX LEE POWER STATION
KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A	UNIT 1		(866,122)		12,131	552,296	263,089	(50,737)
B	UNIT 2		(850,684)		11,348	516,290	246,881	(87,513)
C	UNIT 3		(872,264)		11,803	538,368	256,217	(77,679)
D	UNIT 4		(1,298,187)		15,813	710,364	338,322	(249,501)
E	UNIT 5		(3,013,350)	31,825	50,853	2,339,133	1,088,041	455,649
F	COMMON FACILITIES	433,538	(272,738)	6,020,467	20,625	1,003,883	1,093,928	8,279,079
	TOTAL DIRECT	433,538	(7,173,345)	6,052,292	122,172	5,660,333	3,296,479	8,269,297

Estimate No 24262F
Project No A13351 021
Estimate Date 8/17/20
Prep/Rev/App GA/BA/BA

AEP SWEPCO KNOX LEE POWER STATION
KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Estimate Totals

Description	Amount	Totals	Hours
Labor	5 660,333		122,172
Material	6 052 262		
Subcontract	433,538		
Construction Equipment	3 296,479		
Scrap Value	(7,173,345)		
	8 269,297	8 269 297	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	339,600		
90 2 Show up Time	113 200		
90-3 Cost Due To OT 5-10 s			
90-4 Cost Due To OT 6-10 s			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	611 300		
91-2 Field Office Expenses	134 500		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	120 800		
91-6 Temporary Facilities	91 900		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	96 800		
91-9 Legal Expenses/Claims	14 300		
Other Construction Indirects			
92-1 Small Tools & Consumables	61 100		
92-2 Scaffolding			
92-3 General Liability Insur	61 100		
92-4 Constr Equip Mob/Demob	33 000		
92-5 Freight on Material	302 600		
92-6 Freight on Scrap			
92-7 Sales Tax			
92-8 Contractors G&A	1 182 700		
92-9 Contractors Profit	1,689,500		
	4,852 400	13,121 697	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	2 029 500		
93-8 EPC Fee			
	2 029 500	15 151 197	
Contingency			
94-1 Contingency on Const Eq	389 000		
94-3 Contingency on Material	743 500		
94-4 Contingency on Labor	853 600		
94-5 Contingency on Subcontr	43 400		
94-6 Contingency on Scrap	717 300		
94-7 Contingency on Indirect	203,000		
	2 949,800	18,100 997	
Escalation			
96-1 Escalation on Const Equip			
96-2 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		18 100,997	
98 Interest During Constr			
		18 100 997	
Total		**18,100,997**	

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AEP SWEPCO KNOX LEE POWER STATION
KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A			UNIT 1									
	10 00 00		WHOLE PLANT DEMOLITION									
		10.22.00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	150 00 CY	-	-		169	8,348	3 655	12 003
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS PIERS, CURBS, AND BASIN	165 00 CY	-	-		186	9,183	4 021	13 204
			MAIN POWER BLOCK FOUNDATION		803 00 CY	-	-		678	33,527	14 680	48 207
			ELEVATED CONCRETE FLOOR / ROOF		525 00 CY	-	-		314	15 557	6 812	22 369
			TURBINE PEDESTAL		645 00 CY	-	-		1,161	57,435	25 147	82 582
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	3 240 00 SF	-	-		49	2 309	1,524	3 833
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, CONTROL HOUSE, ELECTRICAL BAY WATER TREATMENT AREA	5 600 00 SF	-	-		84	3 990	2,634	6,624
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISCELLANEOUS	5,218 00 SF	-	-		78	3,718	2,455	6 172
			CONCRETE						2,718	134,066	60,927	194,994
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		966 00 TN	-	-		981	45,922	15 860	61,783
			STEEL						981	45 922	15 860	61,783
		10 24.00	ARCHITECTURAL									
			MASONRY WALLS		19 983 00 SF	-	-		160	7,210	4 367	11 577
			ARCHITECTURAL						160	7,210	4 367	11,577
		10.25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK		50 00 TN	-	-		101	4,323	2,272	6,595
			CONCRETE CHIMNEY & STACK						101	4 323	2 272	6 595
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6,405	3,366	9 771
			MISCELLANEOUS STRUCTURAL ITEM						150	6,405	3,366	9,771
		10.31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID, FD FANS AND MOTORS		1 215 00 TN	-	-		2 460	115,121	52 972	168 093
			STEAM TURBINE GENERATOR		350 00 TN	-	-		709	30 264	15 904	46 168
			FLUES AND DUCTS INCL BREACHING		100 00 TN	-	-		270	12,633	5 813	18 446
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		70 00 TN	-	-		142	6,053	3 181	9 234
			MISCELLANEOUS SMALL TANKS		30 00 TN	-	-		81	3 459	1 818	5,276
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		100 00 TN	-	-		203	8,647	4 544	13 191
			TURBINE ROOM OH CRANE, 50/10 TON		1 00 LS	-	-		188	8,773	3 030	11,803
			MISCELLANEOUS EQUIPMENT		115 00 TN	-	-		233	9 944	5 226	15 169
			CONDENSER		160 00 TN	-	-		324	13 835	7 271	21,105
			CIRCULATING WATER SYSTEM EQUIPMENT		100 00 TN	-	-		203	8,647	4 544	13 191
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON BRIDGE CRANE	30 00 TN	-	-		61	2 594	1 363	3 957
			MECHANICAL EQUIPMENT						4,872	219,969	105 666	325 634
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		225	9,608	5 049	14 657
			HVAC						225	9,608	5,049	14,657
		10 35 00	PIPING									
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	200 00 TN	-	-		405	17,294	9 088	26 382
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		480	20,496	10 771	31,267
			PIPING VALVES AND HANGERS	BOP	90 00 TN	-	-		182	7 782	4,090	11 872
			PIPING						1 067	45,572	23 949	69 521
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		47 00 TN	-	-		126	5 362	2 818	8,181
			LIGHT FIXTURE		300 00 EA	-	-		120	5,124	2 693	7 817
			MISCELLANEOUS ELECTRICAL EQUIPMENT		71 00 TN	-			190	8 101	4,257	12,358
			ELECTRICAL EQUIPMENT						435	18,587	9 768	28 355
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		64 00 TN	-	-		416	17 763	9 335	27 098
			CABLE TRAY		64 00 TN	-	-		384	16,397	8 617	25 014

Estimate No 24262F
Project No A13351 021
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AEP SWEPCO KNOX LEE POWER STATION
KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			RACEWAY CABLE TRAY, & CONDUIT						800	34,160	17,952	52 112
		10.43 00	CABLE									
			COPPER WIRE / CABLE		62 00 TN	-	-		620	26 474	13,913	40 387
			CABLE						620	26 474	13 913	40,387
			WHOLE PLANT DEMOLITION						12,131	552,296	263,089	815 385
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-3 822 00 TN	-	(634,452)	-				(634,452)
			CARBON STEEL				(634 452)					(634,452)
		18.30 00	COPPER									
			SOLID COPPER	CONDENSER TUBES	-21 60 TN	-	(92,232)	-				(92 232)
			#1 INSULATED COPPER WIRE 65%		-62 00 TN	-	(139,438)	-				(139 438)
			COPPER				(231,670)					(231 670)
			SCRAP VALUE				(866,122)					(866 122)
			A UNIT 1				**(866,122)**		**12,131**	**552,296**	**263,089**	**(50,737)**
B			**UNIT 2**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	150 00 CY	-	-		169	8 348	3 655	12 003
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS, PIERS CURBS AND BASIN	165 00 CY	-	-		186	9 183	4 021	13 204
			MAIN POWER BLOCK FOUNDATION		640 00 CY	-	-		540	26 722	11,700	38,422
			ELEVATED CONCRETE FLOOR / ROOF		415 00 CY	-	-		249	12 298	5,384	17 682
			TURBINE PEDESTAL		645 00 CY	-	-		1,161	57,435	25,147	82 582
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	3,240 00 SF	-	-		49	2 309	1,524	3 833
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM CONTROL HOUSE ELECTRICAL BAY WATER TREATMENT AREA	5 600 00 SF	-	-		84	3 990	2 634	6 624
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM MISCELLANEOUS	4 943 00 SF	-	-		74	3 522	2 325	5,847
			CONCRETE						2 511	123 805	66,391	180,196
		10 23 00	STEEL									
			STRUCTURAL, GIRT AND GALLERY STEEL		903 00 TN	-	-		917	42 927	14 826	57,753
			STEEL						917	42,927	14,826	57,753
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		10 920 00 SF	-	-		87	3 940	2 387	6 327
			ARCHITECTURAL						87	3 940	2,387	6,327
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK		50 00 TN	-	-		101	4 323	2,272	6 595
			CONCRETE CHIMNEY & STACK						101	4,323	2,272	6 595
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID FD FANS AND MOTORS		1 215 00 TN	-	-		2 460	115 121	52,972	168,093
			STEAM TURBINE GENERATOR		350 00 TN				709	30 264	15,904	46,168
			FLUES AND DUCTS INCL BREACHING		100 00 TN	-	-		270	12,633	5,813	18 446
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		70 00 TN	-	-		142	6,053	3,181	9 234
			MISCELLANEOUS SMALL TANKS		30 00 TN				81	3,459	1 818	5,276
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		100 00 TN	-	-		203	8,647	4,544	13 191
			TURBINE ROOM OH CRANE 50/10 TON	INCL IN UNIT 1 TURBINE ROOM OVERHEAD CRANE	0 00 LS	-	-	0		0	0	0
			MISCELLANEOUS EQUIPMENT		115 00 TN	-	-		233	9 944	5 226	15,169
			CONDENSER		160 00 TN	-	-		324	13,835	7 271	21,105
			CIRCULATING WATER SYSTEM EQUIPMENT		100 00 TN	-	-		203	8 647	4 544	13,191
			CIRCULATING WATER SYSTEM EQUIPMENT	INCL IN UNIT 1 20T BRIDGE CRANE	0 00 TN	-	-	0		0	0	0
			MECHANICAL EQUIPMENT						4 624	208,601	101,272	309 874
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		225	9 608	5 049	14 657
			HVAC						225	9,608	5,049	14,657
		10 35 00	PIPING									

Estimate No 24262F
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AEP SWEPCO KNOX LEE POWER STATION
KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 35 00	PIPING									
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	200 00 TN	-			405	17 294	9 088	26 382
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		480	20,496	10,771	31,267
			PIPING VALVES AND HANGERS	BOP	90 00 TN	-	-		182	7 762	4,090	11,872
			PIPING						1,067	45,572	23,949	69,521
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		47 00 TN	-	-		126	5,362	2,818	8,181
			LIGHT FIXTURE		200 00 EA	-	-		80	3,416	1,795	5 211
			MISCELLANEOUS ELECTRICAL EQUIPMENT		71 00 TN	-			190	8 101	4,257	12 358
			ELECTRICAL EQUIPMENT						395	16 879	8 870	25,750
		10 42 00	RACEWAY CABLE TRAY, & CONDUIT									
			CONDUIT		64 00 TN	-	-		416	17,763	9,335	27,098
			CABLE TRAY		64 00 TN	-	-		384	16 397	8,617	25 014
			RACEWAY, CABLE TRAY & CONDUIT						800	34,160	17 952	52 112
		10 43 00	CABLE									
			COPPER WIRE / CABLE		62 00 TN	-	-		620	26,474	13 913	40,387
			CABLE						620	26,474	13,913	40,387
			WHOLE PLANT DEMOLITION						11 348	516 290	246 881	763,171
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-3,729 00 TN	-	(619 014)	-				(619,014)
			CARBON STEEL				(619,014)					(619 014)
		18.30 00	COPPER									
			SOLID COPPER	CONDENSER TUBES	21 60 TN	-	(92 232)	-				(92,232)
			#1 INSULATED COPPER WIRE 65%		-62 00 TN	-	(139 438)	-				(139,438)
			COPPER				(231 670)					(231,670)
			SCRAP VALUE				(850,684)					(850 684)
			B UNIT 2				**(850,684)**		**11,348**	**516,290**	**246,881**	**(87,513)**
C			**UNIT 3**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	150 00 CY	-			169	8 348	3 655	12 003
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS AND BASIN	165 00 CY	-	-		186	9 183	4 021	13 204
			MAIN POWER BLOCK FOUNDATION		949 00 CY	-	-		801	39,623	17,349	56 972
			ELEVATED CONCRETE FLOOR / ROOF		474 00 CY	-			284	14 046	6 150	20 196
			TURBINE PEDESTAL		645 00 CY	-			1,161	57 435	25,147	82 582
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	3 240 00 SF	-	-		49	2 309	1,524	3 833
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM CONTROL HOUSE, ELECTRICAL BAY WATER TREATMENT AREA	6 400 00 SF	-			96	4,560	3,011	7,571
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISCELLANEOUS	4,943 00 SF	-	-		74	3 522	2,325	5 847
			CONCRETE						2,819	139,025	63,181	202 207
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		1,033 00 TN		-		1 050	49 107	16 960	66 068
			STEEL						1 050	49 107	16,960	66,068
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		12 800 00 SF	-	-		102	4 618	2 798	7 416
			ARCHITECTURAL						102	4,618	2,798	7,416
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK		50 00 TN	-	-		101	4,323	2,272	6 595
			CONCRETE CHIMNEY & STACK						101	4 323	2 272	6,595
		10.31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES, INCL ID FD FANS AND MOTORS		1 215 00 TN	-	-		2 460	115 121	52,972	168 093
			STEAM TURBINE GENERATOR		350 00 TN	-	-		709	30 264	15 904	46 168
			FLUES AND DUCTS INCL BREACHING		100 00 TN	-	-		270	12 633	5 813	18 446

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KNOX LEE POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 31 00	MECHANICAL EQUIPMENT										
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		70 00	TN	-	-		142	6 053	3,181	9 234
			MISCELLANEOUS SMALL TANKS		30 00	TN	-	-		81	3 459	1 818	5 276
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		100 00	TN	-	-		203	8 647	4,544	13,191
			TURBINE ROOM OH CRANE, 50/10 TON	INCL IN UNIT 1 TURBINE ROOM OVERHEAD CRANE	0 00	LS	-	-					
			MISCELLANEOUS EQUIPMENT		115 00	TN	-	-		233	9 944	5,226	15 169
			CONDENSER		160 00	TN	-	-		324	13 835	7 271	21,105
			CIRCULATING WATER SYSTEM EQUIPMENT		100 00	TN	-	-		203	8 647	4,544	13 191
			CIRCULATING WATER SYSTEM EQUIPMENT	INCL IN UNIT 1 20T BRIDGE CRANE	0 00	TN	-	-					
			MECHANICAL EQUIPMENT							4 624	208 601	101 272	309,874
		10 34 00	HVAC										
			MAIN BUILDING HVAC		1 00	LT	-	-		225	9 608	5 049	14 657
			HVAC							225	9,608	5,049	14,657
		10 35 00	PIPING										
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	200 00	TN	-	-		405	17 294	9 088	26,382
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00	LT	-	-		480	20 496	10,771	31,267
			PIPING, VALVES AND HANGERS	BOP	90 00	TN	-	-		182	7 782	4 090	11 872
			PIPING							1 067	45 572	23,949	69,521
		10 41 00	ELECTRICAL EQUIPMENT										
			TRANSFORMERS		47 00	TN	-	-		126	5 362	2,818	8,181
			LIGHT FIXTURE		200 00	EA	-	-		80	3 416	1,795	5,211
			MISCELLANEOUS ELECTRICAL EQUIPMENT		71 00	TN	-	-		190	8 101	4 257	12,358
			ELECTRICAL EQUIPMENT							395	16,879	8,870	25 750
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT										
			CONDUIT		64 00	TN	-	-		416	17,763	9 335	27 098
			CABLE TRAY		64 00	TN	-	-		384	16 397	8 617	25 014
			RACEWAY, CABLE TRAY & CONDUIT							800	34 160	17,952	52,112
		10 43 00	CABLE										
			COPPER WIRE / CABLE		62 00	TN	-	-		620	26 474	13 913	40 387
			CABLE							620	26,474	13,913	40,387
			WHOLE PLANT DEMOLITION							11,803	538,368	256,217	794 585
	18 00 00		SCRAP VALUE										
		18.10.00	CARBON STEEL										
			CARBON STEEL		3 859 00	TN	-	(640,594)	-				(640,594)
			CARBON STEEL					(640,594)					(640,594)
		18 30.00	COPPER										
			SOLID COPPER	CONDENSER TUBES	21 60	TN	-	(92 232)	-				(92 232)
			#1 INSULATED COPPER WIRE 65%		42 00	TN	-	(139 438)	-				(139 438)
			COPPER					(231,670)					(231,670)
			SCRAP VALUE					(872 264)					(872,264)
			C UNIT 3					**(872,264)**		**11,803**	**538,368**	**256,217**	**(77,679)**
D			**UNIT 4**										
	10 00 00		WHOLE PLANT DEMOLITION										
		10 22 00	CONCRETE										
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	200 00	CY	-	-		225	11 131	4,874	16,004
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS PIERS CURBS AND BASIN	160 00	CY	-	-		180	8 905	3,899	12 803
			MAIN POWER BLOCK FOUNDATION		874 00	CY	-	-		738	36,492	15 978	52 469
			ELEVATED CONCRETE FLOOR / ROOF		534 00	CY	-	-		320	15 824	6,928	22 752
			TURBINE PEDESTAL		850 00	CY	-	-		1 530	75 689	33,140	108 829
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	3,417 00	SF	-	-		51	2 435	1 607	4 042
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, CONTROL HOUSE ELECTRICAL BAY, WATER TREATMENT AREA	7,200 00	SF	-	-		108	5,130	3 387	8 517
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM MISCELLANEOUS	3 903 00	SF	-	-		59	2,781	1,836	4 617
			CONCRETE							3 210	158 386	71,648	230,034
		10.23 00	STEEL										

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		10 23 00	STEEL									
			STRUCTURAL, GIRT AND GALLERY STEEL		1 330 00 TN	-	-		1 351	63 226	21,837	85 063
			STEEL						1,351	63,226	21,837	85,063
		10.24 00	ARCHITECTURAL									
			MASONRY WALLS		14,040 00 SF	-	-		112	5 066	3,069	8 134
			ARCHITECTURAL						112	5,066	3 069	8 134
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK		80 00 TN	-	-		162	6 917	3,635	10 553
			CONCRETE CHIMNEY & STACK						162	6,917	3,635	10,553
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6,405	3,366	9 771
			MISCELLANEOUS STRUCTURAL ITEM						150	6,405	3,366	9,771
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID FD FANS AND MOTORS		1,825 00 TN	-	-		3 696	172 918	79,567	252 485
			STEAM TURBINE GENERATOR		475 00 TN	-	-		962	41 072	21 584	62 657
			FLUES AND DUCTS INCL BREACHING		135 00 TN	-	-		365	17 055	7 848	24 903
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		100 00 TN	-	-		203	8 647	4,544	13 191
			MISCELLANEOUS SMALL TANKS		20 00 TN	-	-		54	2,306	1,212	3 518
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		100 00 TN	-	-		203	8 647	4 544	13,191
			TURBINE ROOM OH CRANE 50/10 TON	INCL IN UNIT 1 TURBINE ROOM OVERHEAD CRANE	0 00 LS	-	-					
			MISCELLANEOUS EQUIPMENT		145 00 TN	-	-		294	12,538	6 589	19 127
			CONDENSER		215 00 TN	-	-		435	18,591	9,770	28 360
			CIRCULATING WATER SYSTEM EQUIPMENT		150 00 TN	-	-		304	12,970	6 816	19 786
			CIRCULATING WATER SYSTEM EQUIPMENT	INCL IN UNIT 1 20T BRIDGE CRANE	0 00 TN	-	-					
			MECHANICAL EQUIPMENT						6 514	294,743	142 474	437,217
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		225	9,608	5,049	14 657
			HVAC						225	9,608	5,049	14,657
		10 35 00	PIPING									
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	300 00 TN	-	-		608	25 940	13 632	39 573
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		563	24,040	12 634	36 674
			PIPING, VALVES AND HANGERS	BOP	130 00 TN	-	-		263	11,241	5,907	17 148
			PIPING						1 434	61 221	32,173	93,394
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		75 00 TN	-	-		200	8,557	4 497	13 054
			LIGHT FIXTURE		200 00 EA	-	-		80	3,416	1,795	5 211
			MISCELLANEOUS ELECTRICAL EQUIPMENT		109 00 TN	-	-		291	12,436	6 536	18 972
			ELECTRICAL EQUIPMENT						572	24,409	12 828	37,237
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		85 00 TN	-	-		553	23,592	12 398	35 990
			CABLE TRAY		85 00 TN	-	-		510	21 777	11 444	33 221
			RACEWAY, CABLE TRAY, & CONDUIT						1,063	45,369	23,843	69 211
		10.43 00	CABLE									
			COPPER WIRE / CABLE		82 00 TN	-	-		820	35,014	18,401	53 415
			CABLE						820	35,014	18 401	53 415
			WHOLE PLANT DEMOLITION						15,613	710,364	338.322	1 048 686
18 00 00			SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-5,359 00 TN	-	(889 594)	-				(889,594)
			CARBON STEEL				(889 594)					(889,594)
		18.30 00	COPPER									
			SOLID COPPER	CONDENSER TUBES	-52 50 TN	-	(224 175)	-				(224,175)
			#1 INSULATED COPPER WIRE 65%		-82 00 TN	-	(184 418)	-				(184,418)
			COPPER				(408,593)					(408 593)
			SCRAP VALUE				(1,298,187)					(1 298,187)

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Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			D UNIT 4				**(1,298,187)**		**15,613**	**710,364**	**338,322**	**(249,501)**
E			**UNIT 5**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	INTAKE STRUCTURE	70 00 CY	-	-		79	3 896	1,706	5,601
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT	6,300 00 CY	-	-		7 088	350,619	153 515	504,134
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS, PIERS CURBS AND BASIN	371 00 CY	-	-		417	20,648	9,040	29,688
			MAIN POWER BLOCK FOUNDATION		1 690 00 CY	-	-		1 426	70 562	30,895	101 457
			ELEVATED CONCRETE FLOOR / ROOF		1 754 00 CY	-	-		1 051	51 975	22,757	74 732
			TURBINE PEDESTAL		1 303 00 CY	-	-		2 345	116 027	50,801	166,828
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	5 751 00 SF	-	-		86	4 098	2 705	6 803
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, CONTROL HOUSE ELECTRICAL BAY, WATER TREATMENT AREA	14 240 00 SF	-	-		214	10 146	6 699	16 845
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISCELLANEOUS	2 840 00 SF	-	-		43	2 024	1,336	3,359
			CONCRETE						12 748	629 993	279,464	909,448
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		1 997 00 TN	-	-		2 029	94 935	32 788	127 723
			STEEL						2,029	94,935	32,788	127 723
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		56 000 00 SF	-	-		448	20 205	12 239	32 444
			ARCHITECTURAL						448	20 205	12 239	32,444
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK, 216" DIA x 183 TALL		86 00 TN	-	-		174	7 436	3 908	11 344
			CONCRETE CHIMNEY & STACK						174	7,436	3,908	11 344
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6 405	3 366	9 771
			MISCELLANEOUS STRUCTURAL ITEM						150	6 405	3,366	9,771
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		7,775 00 TN	-	-		15 744	736,679	338,976	1 075 656
			STEAM TURBINE GENERATOR		892 00 TN	-	-		1 806	77 129	40 533	117 662
			FLUES AND DUCTS INCL BREACHING		1 465 00 TN	-	-		3 956	185 078	85,162	270 240
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		150 00 TN	-	-		304	12 970	6 816	19,786
			MISCELLANEOUS SMALL TANKS		96 00 TN	-	-		259	11,068	5,816	16 884
			DEMINERALIZED WATER TANK, 60 00 000 GAL, 22 FT DIA X 24 FT TALL		14 00 TN	-	-		38	1 614	848	2 462
			MISCELLANEOUS SMALL TANKS		96 00 TN	-	-		259	11 068	5 816	16 884
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		147 00 TN	-	-		298	12 711	6 680	19 391
			TURBINE ROOM OH CRANE, 55 TON		1 00 EA	-	-		267	12 493	4 315	16 808
			MISCELLANEOUS EQUIPMENT		453 00 TN	-	-		917	39 170	20 585	59 755
			TURBINE ROOM GANTRY CRANE, 5 TON		1 00 EA	-	-		30	1 404	485	1 889
			CONDENSER		350 00 TN	-	-		709	30 264	15 904	46 168
			CIRCULATING WATER SYSTEM EQUIPMENT		302 00 TN	-	-		612	26,113	13,723	39 836
			CIRCULATING WATER SYSTEM EQUIPMENT	GANTRY CRANE	1 00 EA	-	-		150	6 405	3,366	9 771
			MECHANICAL EQUIPMENT						25,348	1,164 165	549,027	1,713 192
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		1,125	48 038	25,245	73 283
			HVAC						1,125	48,038	25,245	73,283
		10 35 00	PIPING									
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	1 237 00 TN	-	-		2 505	106 960	56 211	163 171
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		803	34,288	18 019	52 307
			PIPING, VALVES AND HANGERS	BOP	167 00 TN	-	-		338	14,440	7,589	22 029
			PIPING, VALVES AND HANGERS	CIRCULATING WATER 84 IN DIA INTAKE PIPING	130 00 TN	-	-		263	11,241	5 907	17,148
			PIPING						3 909	166 929	87 726	254,655
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		223 00 TN	-	-		596	25,443	13 371	38 814

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Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 41 00	ELECTRICAL EQUIPMENT									
			LIGHT FIXTURE		200 00 EA	-	-		80	3 416	1 795	5 211
			MISCELLANEOUS ELECTRICAL EQUIPMENT		71 00 TN	-	-		190	8 101	4 257	12,358
			ELECTRICAL EQUIPMENT						866	36,980	19,423	56,383
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		167 00 TN	-	-		1,086	46 351	24 359	70 709
			CABLE TRAY		167 00 TN	-	-		1 002	42 785	22 485	65 270
			RACEWAY, CABLE TRAY, & CONDUIT						2 088	89 136	46 844	135,980
		10 43 00	CABLE									
			COPPER WIRE / CABLE		160 00 TN	-	-		1 600	68 320	35 904	104 224
			CABLE						1,600	68,320	35,904	104,224
			WHOLE PLANT DEMOLITION						50,486	2 332 622	1,096,924	3 428,446
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-15 985 00 TN	-	(2,653,510)	-				(2,653,510)
			CARBON STEEL				(2,653,510)					(2,653,510)
		18 30 00	COPPER									
			#1 INSULATED COPPER WIRE 65%		-160 00 TN	-	(359,840)	-				(359 840)
			COPPER				(359 840)					(359,840)
			SCRAP VALUE				(3 013 350)					(3,013,350)
	22 00 00		CONCRETE									
		22 13 00	CONCRETE									
			FLOWABLE FILL 1500 PSI	DISCHARGE CLOSURE, 2 - 72" DIAMETER BURIED PIPES	335 00 CY	-	-	31,825	168	6,611	2,117	40,553
			CONCRETE					31 825	168	6,611	2 117	40,553
			CONCRETE					31 825	168	6 611	2 117	40 553
			E UNIT 5				**(3,013,350)**	**31,825**	**50,653**	**2,339,133**	**1,098,041**	**455,649**
F			**COMMON FACILITIES**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 21 00	CIVIL WORK									
			REMOVE FENCE		500 00 LF	-	-		13	615	569	1 184
			REMOVE RAILROAD TRACK RAIL, TIES SPREAD BALLAST		5 600 00 TF	-	-		1 305	64,193	59,378	123 570
			PAVED SURFACES		7 450 00 SY	-	-		894	43 976	40 677	84 653
			INTAKE CANAL SHEET PILING	ABANDON IN PLACE	LS	-	-					
			CIVIL WORK						2,212	108,784	100,623	209 407
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS	777 00 CY	-	-		874	43,243	18,934	62 177
			BUILDING/EQUIPMENT FOUNDATION/PAD	TANK AND PUMP FOUDATIONS	403 00 CY	-	-		453	22,428	9 820	32,249
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS CURBS AND BASIN	50 00 CY	-	-		56	2 783	1 218	4 001
			BUILDING/EQUIPMENT FOUNDATION/PAD	INTAKE STRUCTURE, FOR UNITS 1 2 3 4 ONLY	70 00 CY	-	-		79	3,896	1,706	5,601
			BUILDING/EQUIPMENT FOUNDATION/PAD	DISCHARGE STRUCTURE FOR UNITS 1, 2, 3, 4 ONLY	100 00 CY	-	-		113	5,565	2 437	8 002
			BUILDING/EQUIPMENT FOUNDATION/PAD	EXISTING R O BUILDING EXTENTION, 15' X 30'	17 00 CY	-	-		19	946	414	1,360
			BUILDING/EQUIPMENT FOUNDATION/PAD	NEW EQUIPMENT SHED NEAR WELD PIPE SHOP	53 00 CY	-			60	2 950	1 291	4,241
			DISCHARGE OUTFALL STRUCTURE		20 00 CY	-	-		15	742	325	1 067
			CURBS		2,000 00 LF	-	-		24	1 181	1 092	2 273
			WALKWAYS		100 00 CY	-	-		53	2 597	1 137	3,734
			CONCRETE						1 745	86.331	38,374	124,705
		10 23 00	STEEL									
			STRUCTURAL STEEL	DISCHARGE OUTFALL STRUCTURE	20 00 TN	-	-		20	951	328	1 279
			STEEL						20	951	328	1,279
		10 24 00	ARCHITECTURAL									
			BUILDING	SHOP STORE ROOM	23 712 00 CF	-	-		71	3,208	1,943	5,152
			BUILDING	WATER TREATING HOUSE	8 640 00 CF	-	-		26	1 169	708	1,877
			BUILDING	MISCELLANEOUS SMALL SIZE BUILDINGS	16,000 00 CF	-	-		48	2 165	1 311	3,476
			BUILDING	SHOP STORE ROOM SHED	13 000 00 CF	-	-		39	1 759	1,065	2,824

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		10 24 00	ARCHITECTURAL									
			BUILDING	NE STORE ROOM	30 000 00 CF	-	-		90	4 059	2 459	6 518
			BUILDING	E STORE ROOM	19,200 00 CF	-	-		58	2 598	1,574	4,171
			BUILDING	ADDITION TO EXISITNG RO BUILDING	5,400 00 CF	-	-		16	731	443	1,173
			BUILDING	NEW EQUIPMENT SHED NEAR WELD PIPE SHOP	17,040 00 CF	-	-		51	2,306	1,397	3,702
			ARCHITECTURAL						399	17,994	10 900	28,894
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		2 000	85 400	44 880	130,280
			MISCELLANEOUS STRUCTURAL ITEM						2 000	85 400	44 880	130,280
		10 31 00	MECHANICAL EQUIPMENT									
			FUEL OIL STORAGE TANK, 200 000 BBL, 2 EACH		750 00 TN	-	-		2 025	86,468	45,441	131,909
			MISCELLANEOUS STORAGE TANKS AND PUMPS		450 00 TN	-	-		1 215	51,881	27 265	79 145
			MISCELLANEOUS FUEL OIL EQUIPMENT		150 00 TN	-	-		401	17 114	8 994	26,108
			MECHANICAL EQUIPMENT						3 641	155,462	81 700	237 162
		10 35 00	PIPING									
			HYDRANTS		1 00 LT	-	-		113	5 558	5 142	10 700
			YARD DRAINAGE AND UNDERGROUD FIRE LINE PIPE	ABANDON IN PLACE	LT	-	-					
			PIPING						113	5 558	5 142	10,700
		10 41 00	ELECTRICAL EQUIPMENT									
			OUTDOOR LIGHT POLE / FIXTURE		180 00 EA	-	-		270	11,529	6,059	17,588
			MISCELLANEOUS ELECTRICAL EQUIPMENT		60 00 TN	-	-		160	6 846	3,598	10,443
			ELECTRICAL EQUIPMENT						430	18 375	9,656	28,031
			WHOLE PLANT DEMOLITION						10 580	478 854	291 603	770,458
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		1,430 00 TN		(237,380)	-				(237 380)
			CARBON STEEL	RAILROAD TRACK	-213 00 TN	-	(35 358)					(35 358)
			CARBON STEEL				(272,738)					(272,738)
			SCRAP VALUE				(272 738)					(272,738)
	21 00 00		CIVIL WORK									
		21 17 00	EARTHWORK, EXCAVATION									
			FOUNDATION EXCAVATION, USING 1 CY BACKHOE	CONTAMINATED SOIL	12,617 00 CY	-	-		1 893	104 601	32,495	137 096
			MASS EXCAVATION	LEVEL BERMS AND DIKES	1,026 00 CY	-	-		41	2 114	3 881	5 994
			EARTHWORK, EXCAVATION						1,934	106,716	36 376	143 091
		21 21 00	MASS FILL									
			MASS FILL COMMON EARTH USING DUMP TRUCK, 10 MI ROUND TRIP	COVER DISTURBED AREAS OF SITE AND PONDS WITH 2FT OF SOIL	231 297 00 CY		-	6 013,722	8 095	416 913	765,501	7,196,135
			MASS FILL					6,013 722	8 095	416,913	765,501	7,196,135
		21 47 00	LANDSCAPING									
			HYDRO SEEDING		13 00 AC	28,028	-	-		-	-	28 028
			LANDSCAPING			28,028						28,028
		21 52 00	WASTE DISPOSAL									
			DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1 500 00 CY	27,000	-					27,000
			DISPOSAL AND TRANSPORTATION FEE	CONTAMINATED SOIL	12,617 00 CY	378 510	-				-	378 510
			WASTE DISPOSAL			405,510						405,510
			CIVIL WORK			433,538		6 013 722	10 029	523 628	801 876	7,772,764
	22 00 00		CONCRETE									
		22 13 00	CONCRETE									
			FLOWABLE FILL 1500 PSI	INTAKE STRUCTURE CLOSURE FOR UNITS 1, 2 3 4 ONLY	71 00 CY		-	6 745	36	1,401	449	8 595
			CONCRETE					6 745	36	1,401	449	8,595
			CONCRETE					6,745	36	1 401	449	8,595
			F COMMON FACILITIES			**433,538**	**(272,738)**	**6,020,467**	**20,625**	**1,003,883**	**1,093,928**	**8,279,079**

Lieberman Plant Units 1-4

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company(Owner)
and American Electric Power

Project No. A13351.021
August 19, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/10/20	Comments	G. Amen	B. Andric		All
0	8/19/20	Use	G. Amen	B. Andric	A. Redd	All

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1.0 INTRODUCTION

The Lieberman Plant located near Mooringsport, Louisiana in Caddo County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of four (4) gas fired generating units with a total generating capacity of 278 megawatts. The Units were placed in operation as follows:

Unit 1	1947 (Retired In-Place)
Unit 2	1949 (Retired In-Place)
Unit 3	1957
Unit 4	1959

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Lieberman Plant Units in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Lieberman Plant Units 1-4 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24249F, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
90, 91, 92	General Condition Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 4,737,160
Scrap Value	($ 3,866,586)
General Conditions Cost	$ 1,728,700
Indirect Cost	$ 646,600
Contingency Cost	$ 1,098,000
Total Project Cost	$ 4,343,874

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Lieberman Plant Units 1-4 generating facility and plant common services associated with the unit. Common facilities include:

- Various Storerooms and Buildings
- Intake and Discharge Structures
- Fuel Oil Equipment and Tanks
- Water Treating House and Equipment

The following are excluded from the scope of the conceptual demolition cost estimate:

- Asbestos Removal
- Switchyard

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Unit 1 Steam Turbine Generator has been removed.
- Unit 4 Condenser tubes have been replaced with 316 SS Tubes.
- Added new building, 20 ft x 24 ft.
- Added new turbine plate and frame lube oil coolers external to the oil tanks on both Units 3 and 4. Two on each unit.

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Lieberman Plant is a conceptual estimate of the cost to dismantle Lieberman Plant Units 1-4. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work). All units will be demolished at the same time.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Shreveport, Louisiana as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Stainless Steel @ 830 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- Emergency or Black Start Diesels are not included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be from onsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.
- Concrete / Brick chimney(s) will be demolished using Top-To-Bottom, Piece-Meal, Non-Explosive demolition method.

5.0 REFERENCES

Drawings utilized in the preparation of the demolition cost estimate are identified in Table 5-1.

Table 5-1
Reference Drawings

Document Number	Revision/Date/Job No.	Title
SL-1401	job 2390-1	Equipment Data Unit 3
M-1	Rev J	Property Plat
M-120	3/1/56	General Arrangement Plan, Main Floor, Unit 3
M-121	Rev A	General Arrangement Plan, Basement Floor, Unit 3
M-122	Rev A	General Arrangement Plan, Cross Section, Unit 3
M-123	3/1/56	General Arrangement Plan, DC Htr & Fan Floor, Unit 3
M-124	3/1/56	General Arrangement Plan, Turbine Room, Unit 3
M-125	3/1/56	General Arrangement Plan, Longitudinal Section - Pump Bay, Unit 3
SL-1548	job 2641	Equipment Data, Building Data Unit 4
M-251	12-11-56	General Arrangement Plan, Main Floor, Unit 4
M-252	12-11-56	General Arrangement Plan, Basement Floor, Unit 4
M-253	1-15-57	General Arrangement Plan, Cross Section, Unit 4
M-254	12-11-56	General Arrangement Plan, DC Htr & Fan Floor, Unit 4
M-255	12-11-56	General Arrangement Plan, Longitudinal Sect., Turbine Room, Unit 4
M-256	12-11-56	General Arrangement Plan, Longitudinal Sect., Pump Bay, Unit 4

EXHIBIT 1
Lieberman Plant Unit 1
Conceptual Demolition Cost Estimate No. 24249F

AEP / SWEPCO
LIEBERMAN POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20LASHR
Project No.	A13351 021
Estimate Date	8/19/20
Reviewed By	BA
Approved By	BA
Estimate No.	24249F

Estimate No 24249F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/App GA/BA/BA

AEP / SWEPCO
LIEBERMAN POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A	UNIT 1		(578,245)		9 260	410,384	200 717	32 856
B	UNIT 2		(612 939)		9 651	426,082	209 112	22 255
C	UNIT 3		(1 259 515)		19 046	842,285	414 386	(2 844)
D	UNIT 4		(1 299 023)		18 689	826,389	407,671	(64 963)
E	COMMON FACILITIES	365 060	(116 864)		8 167	365 246	269,827	883,269
	TOTAL DIRECT	365,060	(3,866,586)		64,812	2,870,386	1,501,714	870,574

Estimate No 24249F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/App GA/BA/BA

AEP / SWEPCO
LIEBERMAN POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Estimate Totals

Description	Amount	Totals	Hours
Labor	2,870,386		64,812
Material			
Subcontract	365,060		
Construction Equipment	1,501,714		
Scrap Value	(3,866,586)		
	870 574	870 574	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	172,200		
90-2 Show-up Time	57 400		
90-3 Cost Due To OT 5-10 s			
90-4 Cost Due To OT 6-10 s			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	310,000		
91-2 Field Office Expenses	68 200		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	61,200		
91-6 Temporary Facilities	46 600		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	49 100		
91-9 Legal Expenses/Claims	7 300		
Other Construction Indirects			
92-1 Small Tools & Consumables	31,000		
92-2 Scaffolding			
92-3 General Liability Insur	31 000		
92-4 Constr Equip Mob/Demob	15 000		
92-5 Freight on Material			
92-6 Freight on Scrap Value			
92-7 Sales Tax			
92-8 Contractors G&A	362 200		
92-9 Contractors Profit	517,500		
	1 728,700	2,599 274	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	646 600		
93-8 EPC Fee			
	646 600	3 245 874	
Contingency			
94-1 Contingency on Const Eq	177 200		
94-3 Contingency on Material			
94-4 Contingency on Labor	432 900		
94-5 Contingency on Subcontr	36 500		
94-6 Contingency on Scrap	386 700		
94-7 Contingency on Indirect	64,700		
	1 098,000	4 343 874	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Scrap			
96-7 Escalation on Indirects			
		4 343 874	
98 Interest During Constr			
		4 343 874	
Total		**4,343,874**	

Estimate No 24249F
Project No A13351 021
Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
LIEBERMAN POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
A			UNIT 1										
	10 00 00		WHOLE PLANT DEMOLITION										
		10 22 00	CONCRETE										
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE)	124 00	CY	-	-		140	6 695	3 022	9 716
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS, PIERS, CURBS, AND BASIN	136 00	CY	-	-		153	7 342	3,314	10 656
			MAIN POWER BLOCK FOUNDATION		802 00	CY	-	-		677	32 484	14,661	47,145
			ELEVATED CONCRETE FLOOR / ROOF		161 00	CY	-	-		96	4 628	2,089	6 717
			TURBINE PEDESTAL		467 00	CY	-			841	40,340	18,207	58,548
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	4,934 00	SF	-	-		74	3 414	2,321	5,735
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM CONTROL ROOM ELECRCIAL BAY BUNKER BAY	4,293 00	SF	-			64	2 971	2 019	4 990
			CONCRETE							2,045	97,874	45,634	143,508
		10 23 00	STEEL										
			STRUCTURAL, GIRT AND GALLERY STEEL		670 00	TN	-	-		681	30 952	11 000	41 953
			STEEL							681	30 952	11,000	41,953
		10 24 00	ARCHITECTURAL										
			MASONRY WALLS		17 022 00	SF	-	-		136	5,974	3,720	9,694
			ARCHITECTURAL							136	5,974	3,720	9,694
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM										
			ELEVATOR		1 00	EA	-	-		150	6 243	3,366	9,609
			MISCELLANEOUS STRUCTURAL ITEM							150	6 243	3 366	9 609
		10 31 00	MECHANICAL EQUIPMENT										
			MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		990 00	TN	-	-		2 005	91 156	43,162	134 318
			STEAM TURBINE GENERATOR	REMOVED		TN	-	-					
			FLUES AND DUCTS INCL BREACHING		83 00	TN	-	-		224	10 190	4,825	15 015
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		59 00	TN	-	-		119	4,973	2,681	7,654
			MISCELLANEOUS SMALL TANKS		25 00	TN	-	-		68	2 809	1,515	4 324
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		83 00	TN	-	-		168	6,995	3,772	10 767
			TURBINE ROOM OH CRANE, 50/10 TON		1 00	LS	-	-		188	8 526	3 030	11 556
			MISCELLANEOUS EQUIPMENT		95 00	TN	-	-		192	8,007	4 317	12,324
			CONDENSER		120 00	TN	-	-		243	10 114	5,453	15,567
			CIRCULATING WATER SYSTEM EQUIPMENT	INCLUDING INTAKE RACKS	83 00	TN	-	-		168	6 995	3 772	10 767
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON BRIDGE CRANE	30 00	TN	-	-		61	2 528	1 363	3 892
			MECHANICAL EQUIPMENT							3,436	152,293	73,889	226,182
		10 34 00	HVAC										
			MAIN BUILDING HVAC		1 00	LT	-	-		225	9 365	5 049	14 414
			HVAC							225	9,365	5 049	14,414
		10 35 00	PIPING										
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	165 00	TN	-	-		334	13,906	7,498	21,404
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00	LT	-	-		480	19 978	10,771	30,749
			PIPING VALVES AND HANGERS	BOP	90 00	TN	-	-		182	7 585	4 090	11 675
			PIPING							996	41,469	22,359	63 828
		10 41 00	ELECTRICAL EQUIPMENT										
			TRANSFORMERS		35 00	TN	-	-		94	3 892	2,099	5 991
			LIGHT FIXTURE		300 00	EA	-	-		120	4 994	2 693	7 687
			MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	54 00	TN	-	-		192	8 008	4,318	12 325
			ELECTRICAL EQUIPMENT							406	16,894	9,109	26,003
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT										
			CONDUIT		54 00	TN	-	-		351	14 609	7,876	22 485
			CABLE TRAY		54 00	TN	-	-		324	13 485	7,271	20,755
			RACEWAY, CABLE TRAY, & CONDUIT							675	28 094	15,147	43,241
		10 43 00	CABLE										
			COPPER WIRE / CABLE		51 00	TN	-			510	21 226	11 444	32 671
			CABLE							510	21,226	11,444	32,671
			WHOLE PLANT DEMOLITION							9 260	410 384	200,717	611,101

Estimate No 24249F
Project No A13351 021
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AEP / SWEPCO
LIEBERMAN POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	18 00 00		SCRAP VALUE									
		18 10.00	CARBON STEEL									
			CARBON STEEL		-2,741 00 TN	-	(455 006)	-				(455 006)
			CARBON STEEL				(455,006)					(455,006)
		18 30 00	COPPER									
			SOLID COPPER	ISO PHASE	-2 00 TN	-	(8 540)	-				(8 540)
			#1 INSULATED COPPER WIRE 65%		-51 00 TN	-	(114 699)	-				(114 699)
			COPPER				(123,239)					(123 239)
			SCRAP VALUE				(578,245)					(578 245)
			A UNIT 1				**(578,245)**		**9,260**	**410,384**	**200,717**	**32,856**
B			**UNIT 2**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10.22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE)	124 00 CY	-	-		140	6 695	3,022	9,716
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS, PIERS CURBS AND BASIN	136 00 CY	-	-		153	7 342	3,314	10,656
			MAIN POWER BLOCK FOUNDATION		741 00 CY	-	-		625	30 013	13,546	43 559
			ELEVATED CONCRETE FLOOR / ROOF		149 00 CY	-	-		89	4,283	1,933	6 216
			TURBINE PEDESTAL		467 00 CY	-	-		841	40 340	18 207	58 548
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	4 792 00 SF	-	-		72	3,316	2 254	5 570
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM CONTROL ROOM ELECRCIAL BAY BUNKER BAY	3,604 00 SF	-	-		54	2,494	1,695	4,189
			CONCRETE						1,974	94,493	43,972	138,455
		10.23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		670 00 TN	-	-		681	30,952	11 000	41 953
			STEEL						681	30,952	11,000	41 953
		10 24.00	ARCHITECTURAL									
			MASONRY WALLS		8 976 00 SF	-	-		72	3,150	1,962	5,112
			ARCHITECTURAL						72	3 150	1 962	5,112
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6 243	3,366	9 609
			MISCELLANEOUS STRUCTURAL ITEM						150	6,243	3,366	9,609
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES, INCL ID, FD FANS AND MOTORS		990 00 TN	-	-		2 005	91,156	43,162	134,318
			STEAM TURBINE GENERATOR		260 00 TN	-	-		527	21 913	11 815	33,728
			FLUES AND DUCTS INCL BREACHING		83 00 TN	-	-		224	10,190	4 825	15 015
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		59 00 TN	-	-		119	4 973	2,681	7 654
			MISCELLANEOUS SMALL TANKS		25 00 TN	-	-		68	2,809	1 515	4,324
			WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		83 00 TN	-	-		168	6,995	3,772	10,767
			TURBINE ROOM OH CRANE 50/10 TON		1 00 LS	-	-		188	8,528	3,030	11 556
			MISCELLANEOUS EQUIPMENT		95 00 TN	-	-		192	8 007	4 317	12 324
			CONDENSER		120 00 TN	-	-		243	10,114	5 453	15 567
			CIRCULATING WATER SYSTEM EQUIPMENT	INCLUDING INTAKE RACKS	83 00 TN	-	-		168	6 995	3,772	10 767
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON BRIDGE CRANE	30 00 TN	-	-		61	2 528	1,363	3,892
			MECHANICAL EQUIPMENT						3,962	174 206	85,704	259 909
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		225	9 365	5 049	14 414
			HVAC						225	9,365	5,049	14,414
		10 35 00	PIPING									
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	165 00 TN	-	-		334	13,906	7,498	21,404
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		480	19 978	10,771	30 749
			PIPING VALVES AND HANGERS	BOP	90 00 TN	-	-		182	7 585	4,090	11 675
			PIPING						996	41 469	22 359	63,828
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		35 00 TN	-	-		94	3 892	2,099	5,991

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Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 41 00	ELECTRICAL EQUIPMENT									
			LIGHT FIXTURE		300 00 EA	-	-		120	4,994	2 693	7 687
			MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	54 00 TN	-			192	8 008	4 316	12 325
			ELECTRICAL EQUIPMENT						406	16,894	9,109	26,003
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		54 00 TN	-	-		351	14 609	7,876	22 485
			CABLE TRAY		54 00 TN	-	-		324	13 485	7 271	20 755
			RACEWAY, CABLE TRAY, & CONDUIT						675	28 094	15,147	43,241
		10 43 00	CABLE									
			COPPER WIRE / CABLE		51 00 TN	-	-		510	21 226	11 444	32 671
			CABLE						510	21,226	11,444	32,671
			WHOLE PLANT DEMOLITION						9,651	426,082	209 112	635,194
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-2 950 00 TN	-	(489 700)	-				(489,700)
			CARBON STEEL				(489,700)					(489 700)
		18 30 00	COPPER									
			SOLID COPPER	ISO PHASE	-2 00 TN	-	(8 540)	-				(8 540)
			#1 INSULATED COPPER WIRE 65%		-51 00 TN	-	(114,699)	-				(114,699)
			COPPER				(123,239)					(123,239)
			SCRAP VALUE				(6 12 939)					(612,939)
			B UNIT 2				**(612,939)**		**9,651**	**426,082**	**209,112**	**22,255**
C			**UNIT 3**									
	10 00 00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT ON FRAME	CY							
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS CURBS, AND BASIN	70 00 CY	-	-		79	3,779	1 706	5 485
			MAIN POWER BLOCK FOUNDATION		1,040 00 CY	-	-		878	42,124	19,012	61,136
			ELEVATED CONCRETE FLOOR / ROOF		909 00 CY	-	-		544	26,130	11,794	37 924
			TURBINE PEDESTAL		930 00 CY	-	-		1,674	80,335	36,259	116 594
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	6,812 00 SF	-	-		102	4,714	3 204	7,918
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM CONTROL ROOM ELECRCIAL BAY BUNKER BAY	7,284 00 SF	-	-		109	5 040	3,426	8,467
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	WATER TREATMENT AREA	320 00 SF	-	-		5	221	151	372
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM MISC	5,629 00 SF	-	-		84	3,895	2 648	6 543
			CONCRETE						3 476	166,238	78,200	244,438
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		1,037 00 TN	-	-		1 054	47 907	17 026	64 933
			STEEL						1,054	47,907	17,026	64,933
		10 24 00	ARCHITECTURAL									
			MASONRY WALLS		14,880 00 SF	-	-		119	5 222	3 252	8,474
			ARCHITECTURAL						119	5 222	3 252	8,474
		10 25 00	CONCRETE CHIMNEY & STACK									
			STEEL STACK 2 EACH 11 FT DIA X 47 FT TALL		33 00 TN	-	-		67	2,781	1 500	4,281
			CONCRETE CHIMNEY & STACK						67	2,781	1,500	4,281
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
			ELEVATOR		1 00 EA	-	-		150	6 243	3 366	9 609
			MISCELLANEOUS STRUCTURAL ITEM						150	6 243	3,366	9,609
		10 31 00	MECHANICAL EQUIPMENT									
			MAIN BOILER AND APPURTENANCES INCL ID, FD FANS AND MOTORS		2 250 00 TN	-			4 556	207 173	98 096	305 269
			STEAM TURBINE GENERATOR		523 00 TN	-	-		1 059	44,079	23 766	67,844
			FLUES AND DUCTS INCL BREACHING		481 00 TN	-	-		1,299	59 052	27 961	87 013
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		100 00 TN	-	-		203	8 428	4 544	12,972
			MISCELLANEOUS SMALL TANKS		50 00 TN	-	-		135	5,619	3 029	8,648
			TURBINE ROOM OH CRANE 100/20 TON		1 00 LS	-	-		267	12,140	4,315	16,455

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Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
		10 31 00	MECHANICAL EQUIPMENT									
			MISCELLANEOUS EQUIPMENT		122 00 TN	-	-		247	10,282	5,544	15,826
			TURBINE ROOM GANTRY CRANE, 5 TON		1 00 LS	-	-		28	1,273	452	1,726
			CONDENSER		272 00 TN	-	-		551	22,924	12,360	35 284
			CIRCULATING WATER SYSTEM EQUIPMENT	INCLUDING INTAKE RACKS	331 00 TN	-	-		670	27 897	15 041	42 938
			CIRCULATING WATER SYSTEM EQUIPMENT	20 TON GANTRY CRANE	30 00 TN	-	-		61	2 528	1 363	3,892
			MECHANICAL EQUIPMENT						9,075	401,395	196,471	597 867
		10 34 00	HVAC									
			MAIN BUILDING HVAC		1 00 LT	-	-		335	13 943	7 517	21 460
			HVAC						335	13 943	7,517	21,460
		10 35 00	PIPING									
			PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	350 00 TN	-			709	29 498	15 904	45 403
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LT	-	-		600	24 972	13 464	38 436
			PIPING VALVES AND HANGERS	BOP	139 00 TN	-	-		281	11 715	6 316	18 031
			PIPING						1,590	66 185	35 685	101 870
		10 41 00	ELECTRICAL EQUIPMENT									
			TRANSFORMERS		101 00 TN	-	-		270	11 232	6 056	17 288
			LIGHT FIXTURE		300 00 EA	-	-		120	4 994	2 693	7,687
			MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	144 00 TN	-	-		513	21,354	11 513	32,867
			ELECTRICAL EQUIPMENT						903	37,581	20,262	57 843
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
			CONDUIT		103 00 TN	-	-		670	27 865	15 024	42 888
			CABLE TRAY		103 00 TN	-	-		618	25,721	13 868	39,589
			RACEWAY, CABLE TRAY, & CONDUIT						1 288	53 586	28,892	82,477
		10 43 00	CABLE									
			COPPER WIRE / CABLE		99 00 TN	-	-		990	41,204	22 216	63 419
			CABLE						990	41,204	22,216	63,419
			WHOLE PLANT DEMOLITION						19,046	842,285	414,386	1,256,671
	18 00 00		SCRAP VALUE									
		18 10 00	CARBON STEEL									
			CARBON STEEL		-6 169 00 TN	-	(1 024 054)	-				(1,024,054)
			CARBON STEEL				(1 024,054)					(1,024 054)
		18 30 00	COPPER									
			SOLID COPPER	ISO PHASE	-3 00 TN	-	(12,810)					(12,810)
			#1 INSULATED COPPER WIRE 65%		-99 00 TN	-	(222 651)	-				(222,651)
			COPPER				(235,461)					(235,461)
			SCRAP VALUE				(1,259 515)					(1 259,515)
			C UNIT 3				**(1,259,515)**		**19,046**	**842,285**	**414,386**	**(2,844)**
D			**UNIT 4**									
	10 00.00		WHOLE PLANT DEMOLITION									
		10 22 00	CONCRETE									
			BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT ON FRAME	CY	-	-					
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS PIERS CURBS AND BASIN	70 00 CY	-	-		79	3,779	1 706	5,485
			MAIN POWER BLOCK FOUNDATION		1 037 00 CY	-	-		875	42,002	18,957	60,960
			ELEVATED CONCRETE FLOOR / ROOF		401 00 CY	-	-		240	11,527	5,203	16,730
			TURBINE PEDESTAL		1 133 00 CY	-	-		2,039	97,871	44 173	142,044
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	BOILER ROOM	6,812 00 SF	-			102	4,714	3 204	7,918
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM CONTROL ROOM, ELECRCIAL BAY, BUNKER BAY	7 284 00 SF	-	-		109	5 040	3 426	8 467
			PRECAST CONCRETE CHANNELS AND LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISC	2,640 00 SF	-			40	1 827	1 242	3 069
			CONCRETE						3 485	166,760	77,912	244,672
		10 23 00	STEEL									
			STRUCTURAL GIRT AND GALLERY STEEL		1,037 00 TN	-	-		1 054	47,907	17 026	64,933
			STEEL						1,054	47,907	17,026	64,933
		10.24.00	ARCHITECTURAL									
			MASONRY WALLS		13,524 00 SF	-	-		108	4,746	2 956	7,702

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Area	Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			ARCHITECTURAL							108	4,746	2,956	7,702
		10 25 00	CONCRETE CHIMNEY & STACK										
			STEEL STACK, 2 EACH 11 FT DIA X 47 FT TALL		33 00	TN	-	-		67	2 781	1 500	4 281
			CONCRETE CHIMNEY & STACK							67	2 781	1 500	4,281
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM										
			ELEVATOR		1 00	EA	-	-		150	6 243	3 366	9,609
			MISCELLANEOUS STRUCTURAL ITEM							150	6,243	3 366	9,609
		10 31 00	MECHANICAL EQUIPMENT										
			MAIN BOILER AND APPURTENANCES INCL ID FD FANS AND MOTORS		2 250 00	TN	-	-		4,556	207,173	98 096	305,269
			STEAM TURBINE GENERATOR		523 00	TN	-	-		1 059	44 079	23 766	67 844
			FLUES AND DUCTS INCL BREACHING		481 00	TN	-	-		1 299	59 052	27 961	87 013
			FEEDWATER SYSTEM DEAERATING EQUIPMENT		100 00	TN	-	-		203	8,428	4 544	12,972
			MISCELLANEOUS SMALL TANKS		50 00	TN	-	-		135	5 619	3 029	8 648
			TURBINE ROOM OH CRANE, 100/20 TON	INCL IN UINIT 3 TURBINE ROOM OVERHEAD CRANE		LS	-	-					
			MISCELLANEOUS EQUIPMENT		122 00	TN	-	-		247	10,282	5,544	15,826
			CONDENSER		272 00	TN	-	-		551	22 924	12 360	35,284
			CIRCULATING WATER SYSTEM EQUIPMENT	INCLUDING INTAKE RACKS	331 00	TN	-	-		670	27 897	15 041	42 938
			CIRCULATING WATER SYSTEM EQUIPMENT 20 TON GANTRY CRANE	INCL IN UNIT 3 20T GANTRY CRANE		TN		-					
			MECHANICAL EQUIPMENT							8,720	385 463	190 341	575 794
		10 34 00	HVAC										
			MAIN BUILDING HVAC		1 00	LT	-	-		335	13,943	7 517	21 460
			HVAC							335	13,943	7,517	21,460
		10 35 00	PIPING										
			PIPING VALVES AND HANGERS	BOILER AND TURBINE PLANT	350 00	TN	-	-		709	29,498	15,904	45 403
			CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00	LT	-	-		600	24 972	13 464	38 436
			PIPING VALVES AND HANGERS	BOP	139 00	TN	-	-		281	11 715	6 316	18 031
			PIPING							1 590	66 185	35 685	101,870
		10 41 00	ELECTRICAL EQUIPMENT										
			TRANSFORMERS		101 00	TN	-	-		270	11,232	6 056	17,288
			LIGHT FIXTURE		300 00	EA	-	-		120	4 994	2,693	7 687
			MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	144 00	TN	-	-		513	21 354	11 513	32,867
			ELECTRICAL EQUIPMENT							903	37,581	20 262	57 843
		10 42 00	RACEWAY, CABLE TRAY, & CONDUIT										
			CONDUIT		103 00	TN	-	-		670	27 865	15 024	42,888
			CABLE TRAY		103 00	TN	-	-		618	25 721	13,868	39 589
			RACEWAY, CABLE TRAY, & CONDUIT							1 288	53 586	28,892	82,477
		10 43 00	CABLE										
			COPPER WIRE / CABLE		99 00	TN	-	-		990	41 204	22,216	63 419
			CABLE							990	41,204	22,216	63,419
			WHOLE PLANT DEMOLITION							18,689	826,389	407,671	1 234 060
	18 00 00		SCRAP VALUE										
		18 10 00	CARBON STEEL										
			CARBON STEEL		-6 139 00	TN	-	(1,019,074)	-				(1,019 074)
			CARBON STEEL					(1 019,074)					(1,019,074)
		18 20 00	STAINLESS STEEL										
			STAINLESS STEEL	CONDENSER TUBES	-53 50	TN	-	(44 488)	-				(44,488)
			STAINLESS STEEL					(44,488)					(44,488)
		18 30 00	COPPER										
			SOLID COPPER	ISO PHASE	-3 00	TN	-	(12 810)	-				(12,810)
			#1 INSULATED COPPER WIRE 65%		-99 00	TN	-	(222 651)	-				(222 651)
			COPPER				-	(235 461)					(235,461)
			SCRAP VALUE					(1,299 023)					(1,299 023)
			D UNIT 4					**(1,299,023)**		**18,689**	**826,389**	**407,671**	**(64,963)**
E			**COMMON FACILITIES**										

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Area	Group	Phase	Description	Notes	Quantity		Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 00 00		WHOLE PLANT DEMOLITION										
		10 21 00	CIVIL WORK										
			FENCING REMAINS IN PLACE			LF	-	-					
			REMOVE RAILROAD TRACK RAIL, TIES SPREAD BALLAST		2 000 00	TF	-	-		450	21,474	20,475	41 949
			PAVED SURFACES		1,922 00	SY	-	-		231	11 006	10 494	21 500
			CIVIL WORK							681	32,480	30 969	63,449
		10 22 00	CONCRETE										
			BUILDING/EQUIPMENT FOUNDATION/PAD	MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS	600 00	CY	-	-		675	32 393	14 621	47 014
			BUILDING/EQUIPMENT FOUNDATION/PAD	TANK AND PUMP FOUNDATIONS	527 00	CY	-	-		593	28 452	12 842	41 294
			BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION FIRE WALLS PIERS, CURBS AND BASIN	21 00	CY	-	-		24	1,134	512	1 645
			DISCHARGE CLOSURE		259 00	CY	-	-		194	9 322	4 207	13 530
			CURBS		100 00	LF	-	-		1	57	55	112
			WALKWAYS		131 00	CY	-	-		69	3,301	1,490	4 790
			CONCRETE							1,556	74,659	33,726	108 385
		10 24 00	ARCHITECTURAL										
			BUILDING	WAREHOUSES AND STOREROOM	21,000 00	CF	-	-		63	2,764	1,721	4,485
			BUILDING	MAINTENANCE SHOP	42 000 00	CF	-	-		126	5,528	3 442	8 970
			BUILDING	FUEL OIL PUMPHOUSE	1,728 00	CF	-	-		5	227	142	369
			BUILDING	20 FT X 24 FT BUILDING X 18 FT TALL	8,640 00	CF	-	-		26	1,137	708	1 845
			ARCHITECTURAL							220	9,656	6,013	15 669
		10 25 00	CONCRETE CHIMNEY & STACK										
			CONCRETE CHIMNEY, NO LINER, DEMOLITION TOP-TO-BOTTOM, PIECE-MEAL, NON EXPLOSIVE METHOD	125 FT TALL X 32 FT DIA BASE	1 00	LS	250,000	-					250 000
			CONCRETE CHIMNEY & STACK				250,000						250 000
		10 26 00	MISCELLANEOUS STRUCTURAL ITEM										
			MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00	LT	-	-		2,000	83,240	44,880	128,120
			MISCELLANEOUS STRUCTURAL ITEM							2,000	83,240	44,880	128,120
		10 31 00	MECHANICAL EQUIPMENT										
			FUEL OIL STORAGE TANK 150,000 BBL, 3 EACH		115 00	TN	-	-		311	12,923	6,968	19,891
			MISCELLANEOUS STORAGE TANKS AND PUMPS		481 00	TN	-	-		1 299	54 052	29 143	83 195
			MISCELLANEOUS FUEL OIL EQUIPMENT		35 00	TN	-	-		95	3 933	2 121	6 054
			MECHANICAL EQUIPMENT							1 704	70 908	38 231	109,139
		10 35 00	PIPING										
			HYDRANTS		1 00	LT	-	-		60	2 863	2 730	5 593
			PIPING							60	2,863	2,730	5 593
		10 41 00	ELECTRICAL EQUIPMENT										
			OUTDOOR LIGHT POLE / FIXTURE		180 00	EA	-	-		270	11,237	6,059	17,296
			MISCELLANEOUS ELECTRICAL EQUIPMENT		60 00	TN	-	-		214	8 898	4 797	13 695
			ELECTRICAL EQUIPMENT							484	20 135	10 856	30,991
			WHOLE PLANT DEMOLITION				250,000			6 704	293 941	167 405	711,346
	18 00 00		SCRAP VALUE										
		18 10 00	CARBON STEEL										
			CARBON STEEL		-631 00	TN	-	(104 746)	-				(104 746)
			CARBON STEEL	RAILROAD TRACK	-73 00	TN	-	(12,118)	-				(12 118)
			CARBON STEEL					(116,864)					(116,864)
			SCRAP VALUE					(116 864)					(116,864)
	21 00 00		CIVIL WORK										
		21 17 00	EARTHWORK EXCAVATION										
			FOUNDATION EXCAVATION, USING 1 CY BACKHOE	CONTAMINATED SOIL AND SAND UNDER OIL TANKS	2 576 00	CY	-	-		386	18 605	6 634	25,240
			EXCAVATE CONCRETE CHIMNEY DEBRIS AND DISPOSE ONSITE		522 00	CY	-	-		78	3,770	1,344	5,115
			MASS EXCAVATION	LEVEL BERMS AND DIKES	976 00	CY	-	-		39	1 913	3 692	5 604
			EARTHWORK, EXCAVATION							504	24,288	11,671	35,958
		21 21 00	MASS FILL										
			CUT & FILL, CLAY, 1500 FT HAUL, 14 CY SCRAPER, DOZER SPREAD COMPACTION WATERING TRUCK		14,765 00	CY	-	-		960	47 017	90 752	137,769

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Estimate Date 8/19/20
Prep/Rev/Appr GA/BA/BA

AEP / SWEPCO
LIEBERMAN POWER STATION
DEMOLITION COST ESTIMATE

Area	Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
			MASS FILL						960	47,017	90,752	137,769
		21.47 00	LANDSCAPING									
			HYDRO SEEDING		5 00 AC	10,780	-	-		-	-	10,780
			LANDSCAPING			10,780						10,780
		21 52 00	WASTE DISPOSAL									
			DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1,500 00 CY	27,000	-				-	27,000
			DISPOSAL AND TRANSPORTATION FEE	CONTAMINATED SOIL AND SAND UNDER OIL TANKS	2,576 00 CY	77,280	-				-	77,280
			WASTE DISPOSAL			104 280						104 280
			CIVIL WORK			115 060			1 463	71 305	102 422	288,787
			E COMMON FACILITIES			**365,060**	**(116,864)**		**8,167**	**365,246**	**269,827**	**883,269**

Lone Star Plant Unit 1

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company(Owner)
and American Electric Power

Project No. A13351.021
August 17, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	8/7/20	Comments	G. Amen	B. Andric		All
0	8/17/20	Use	G. Amen	B. Andric	A. Redd	All

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1.0 INTRODUCTION

The Lone Star Plant located near Lone Star, Texas in Morris County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of one gas fired generating unit with a total generating capacity of 40 megawatts. The Unit was placed in operation in 1954. This plant has been retired in June 2020, decommissioning/demolition of the facility has not occurred, and the timeline is unknown.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for Lone Star Plant Unit 1 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for Lone Star Plant Unit 1 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24257F, was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 1,722,871
Scrap Value	($ 832,913)
General Conditions Cost	$ 580,600
Indirect Cost	$ 230,400
Contingency Cost	$ 336,600
Total Project Cost	$ 2,037,558

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete Lone Star Plant Unit 1 generating facility along with the remaining Gas Turbine Peaker foundations and facilities. The Gas Turbine Peakers have been removed.

The following are excluded from the scope of the conceptual demolition cost estimate:

- Asbestos Removal
- Switchyard

There have not been any major physical capital changes made at the station since the previous 2016 cost estimate.

Revisions to the plant facilities that would affect the current cost estimate were provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the Lone Star Plant is a conceptual estimate of the cost to dismantle Lone Star Plant Unit 1. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs, (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated not including asbestos removal (to be performed prior to start of demolition work).

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Dallas, Texas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed.

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- Copper Value @ 4,270 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.

4.8 Assumptions

The following assumptions apply to the cost estimate.

- All chemicals will be removed by the Owner prior to demolition, from the facilities to be demolished.
- All fuel oil will be consumed prior to demolition.
- All electrical equipment and wiring is de-energized prior to start of dismantlement.
- No extraordinary environmental costs for demolition have been included.
- PCB's are not present on site.
- Emergency or Black Start Diesels are not included.
- Handling, on-site and off-site disposal of hazardous materials would be performed in compliance with methods approved by Owner.
- Switchyards within the plant boundaries are not part of the scope, neither are access roads to these facilities. Fences and gates needed to protect the switchyard will be left in place.
- The existing Cooling Lake is to be left in place.
- All items above grade and to a depth of two (2) feet will be demolished. Any other items buried more than two (2) feet will remain in place. All foundations are removed and buried on site.
- Underground piping, conduit and cable ducts will be abandoned in place.
- Underground piping larger than four (4) feet diameter will be filled with sand or slurry and capped at the ends to prevent collapse. Non-metal pipe will be collapsed.
- All demolished materials are considered debris, except for organic combustibles and non-embedded metals which have scrap value.
- The basis for salvage estimating is for scrap value only. No resale of equipment or material is included.
- Disturbed areas will be buried under two (2) feet of topsoil mulched and seeded with grass – no other landscaping is included.
- All borrow material is assumed to be purchased from nearby (10 mile round trip) offsite sources.
- Debris not suitable for burial is to be disposed of off-site. Assumed distance to final disposal is within a five (5) mile haul.
- The entire weight of transformers and generators are valued using only the carbon steel scrap value rate. No additional value is considered for the copper metal content. This is based on information supplied by scrap dealers. Additional cost to the scrap dealer to separate the different metals is offset by the increased value of the copper.

5.0 REFERENCES

5.1 Estimator's notes and data collected at the Lone Star Plant during the initial on-site visit held in August 2008.

EXHIBIT 1
Lone Star Plant Unit 1
Conceptual Demolition Cost Estimate No. 24257F

AEP SWEPCO
LONE STAR POWER STATION
DEMOLITION COST ESTIMATE

Estimator	GA
Labor rate table	20TXDAL
Project No.	A13351 021
Estimate Date	8/17/20
Reviewed By	BA
Approved By	BA
Estimate No.	24257F

Estimate No 24257F
Project No A13351 021
Estimate Date 8/17/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
LONE STAR POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Description	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10 00 00	WHOLE PLANT DEMOLITION				18,306	839 905	421,811	1,261 715
18 00 00	SCRAP VALUE		(832,913)					(832 913)
21 00 00	CIVIL WORK	178 368		190,476	997	54 087	38,225	461 156
	TOTAL DIRECT	178,368	(832,913)	190,476	19,304	893,991	460,036	889,958

Estimate No 24257F
Project No A13351 021
Estimate Date 8/17/20
Prep /Rev/App GA/BA/BA

AEP SWEPCO
LONE STAR POWER STATION
DEMOLITION COST ESTIMATE

Estimate Totals

Description	Amount	Totals	Hours
Labor	893 991		19,304
Material	190,476		
Subcontract	178,368		
Construction Equipment	460 036		
Process Equipment	(832,913)		
	889,958	889,958	
General Conditions			
Additional Labor Costs			
90-1 Labor Supervision	53 600		
90-2 Show-up Time	17 900		
90-3 Cost Due To OT 5-10's			
90-4 Cost Due To OT 6-10's			
90-5 Per Diem			
Site Overheads			
91-1 Construction Management	96,500		
91-2 Field Office Expenses	21,200		
91-3 Material&Quality Control			
91-4 Site Services			
91-5 Safety	19,100		
91-6 Temporary Facilities	14,500		
91-7 Temporary Utilities			
91-8 Mobilization/Demob	15,300		
91-9 Legal Expenses/Claims	2,300		
Other Construction Indirects			
92-1 Small Tools & Consumables	9,700		
92-2 Scaffolding			
92-3 General Liability Insur	9 700		
92-4 Constr Equip Mob/Demob	4 600		
92-5 Freight on Material	9 500		
92-6 Freight on Process Equip			
92-7 Sales Tax			
92-8 Contractors G&A	126 300		
92-9 Contractors Profit	180,400		
	580,600	1,470,558	
Project Indirect Costs			
93-1 Engineering Services			
93-2 CM Support			
93-3 Start-Up/Commissioning			
93-4 Start-Up/Spare Parts			
93-5 Excess Liability Insur			
93-6 Sales Tax On Indirects			
93-7 Owners Cost	230,400		
93-8 EPC Fee			
	230,400	1 700,958	
Contingency			
94-1 Contingency on Const Eq	54,300		
94-3 Contingency on Material	23 400		
94-4 Contingency on Labor	134 800		
94-5 Contingency on Subcontr	17 800		
94-6 Contingency on Process Eq	83 300		
94-7 Contingency on Indirect	23,000		
	336,600	2 037,558	
Escalation			
96-1 Escalation on Const Equip			
96-3 Escalation on Material			
96-4 Escalation on Labor			
96-5 Escalation on Subcontract			
96-6 Escalation on Process Eqp			
96-7 Escalation on Indirects			
		2,037,558	
98 Interest During Constr			
		2 037,558	
Total		**2,037,558**	

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AEP SWEPCO
LONE STAR POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
10.00.00		WHOLE PLANT DEMOLITION									
	10 21 00	CIVIL WORK									
		FENCING REMAINS IN PLACE		LF	-	-					
		REMOVE RAILROAD TRACK RAIL, TIES SPREAD BALLAST		1,600 00 TF	-	-		360	17,708	16,380	34,088
		PAVED SURFACES		1,067 00 SY	-	-		128	6,298	5,826	12,124
		CIVIL WORK						488	24,007	22,206	46,213
	10 22 00	CONCRETE									
		BUILDING/EQUIPMENT FOUNDATION/PAD	DRAFT EQUIPMENT FOUNDATION (2FT BELOW GRADE)	200 00 CY	-	-		225	11,131	4 874	16 004
		BUILDING/EQUIPMENT FOUNDATION/PAD	MISC EQUIPMENT PADS AND SITE BLD FOUNDATIONS	200 00 CY	-	-		225	11,131	4,874	16,004
		BUILDING/EQUIPMENT FOUNDATION/PAD	TRANSFORMER FOUNDATION, FIRE WALLS, PIERS, CURBS, AND BASIN	515 00 CY	-	-		579	28,662	12,549	41,211
		BUILDING/EQUIPMENT FOUNDATION/PAD	TANK AND PUMP FOUNDATIONS, CONCRETE BERMS	106 00 CY	-	-		119	5,899	2,583	8,482
		BUILDING/EQUIPMENT FOUNDATION/PAD	INTAKE STRUCTURE	200 00 CY	-	-		225	11,131	4,874	16 004
		BUILDING/EQUIPMENT FOUNDATION/PAD	DISCHARGE STRUCTURE	100 00 CY	-	-		113	5 565	2,437	8,002
		BUILDING/EQUIPMENT FOUNDATION/PAD	COMBUSTION TURBINE FOUNDATION, EQUIPMENT HAS BEEN REMOVED	1,335 00 CY	-	-		1 502	74,298	32,531	106 828
		MAIN POWER BLOCK FOUNDATION		700 00 CY	-	-		591	29,227	12 797	42,024
		ELEVATED CONCRETE FLOOR / ROOF		721 00 CY	-	-		432	21,365	9,355	30,720
		TURBINE PEDESTAL		775 00 CY	-	-		1,395	69,011	30 216	99 226
		DISCHARGE CLOSURE	ALLOWANCE	60 00 CY	-	-		45	2 226	975	3,201
		INTAKE CLOSURE	ALLOWANCE	60 00 CY	-	-		45	2 226	975	3,201
		CURBS		100 00 LF	-	-		1	59	26	85
		WALKWAYS		20 00 CY	-	-		11	519	227	747
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	AIR HEATER ROOM, MISC	2,000 00 SF	-	-		30	1,425	941	2,366
		PRECAST CONCRETE CHANNEL & LIGHTWEIGHT CONCRETE ROOF	TURBINE ROOM, CONTROL HOUSEM MACHINE SHOP, WATER TREATMENT AREA	7,800 00 SF	-	-		117	5,558	3,669	9,227
		CONCRETE						5,654	279,433	123,900	403,332
	10 23 00	STEEL									
		STRUCTURAL, GIRT AND GALLERY STEEL		510 00 TN		-		518	24,245	8,373	32,618
		STEEL						518	24,245	8,373	32,618
	10 24 00	ARCHITECTURAL									
		BUILDING	WAREHOUSES AND STOREROOMS	12,500 00 CF	-	-		38	1,691	1,025	2,716
		BUILDING	PUMPHOUSE	15,000 00 CF	-	-		45	2 030	1 229	3,259
		MASONRY WALLS		14,000 00 SF	-	-		112	5 051	3 060	8 111
		ARCHITECTURAL						195	8,772	5,314	14,086
	10 25 00	CONCRETE CHIMNEY & STACK									
		STEEL STACK		30 00 TN		-		61	2,594	1,363	3,957
		CONCRETE CHIMNEY & STACK						61	2,594	1 363	3,957
	10 26 00	MISCELLANEOUS STRUCTURAL ITEM									
		ELEVATOR		1 00 EA	-	-		90	3,843	2 020	5,863
		MISCELLANEOUS SMALL OBSTACLE REMOVAL FROM SITE		1 00 LT	-	-		1 000	42,700	22 440	65 140
		MISCELLANEOUS STRUCTURAL ITEM						1,090	46,543	24,460	71,003
	10 31 00	MECHANICAL EQUIPMENT									
		MAIN BOILER AND APPURTENANCES, INCL ID FD FANS AND MOTORS		1,350 00 TN		-		2,734	127 912	58,858	186,770
		STEAM TURBINE GENERATOR		350 00 TN		-		709	30,264	15,904	46 168
		FLUES AND DUCTS INCL BREACHING		100 00 TN		-		270	12 633	5,813	18 446
		FEEDWATER SYSTEM DEAERATING EQUIPMENT		70 00 TN		-		142	6,053	3,181	9 234
		TANKS AND SILOS	(1) 80 000 BARREL AND (1) 55,000 BARREL LUB OIL TANK	220 00 TN	-	-		594	25,364	13,329	38,693
		MISCELLANEOUS SMALL TANKS		38 00 TN		-		103	4,381	2,302	6,683
		MISCELLANEOUS FUEL OIL EQUIPMENT		100 00 TN	-	-		270	11 529	6,059	17,588

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AEP SWEPCO
LONE STAR POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	10 31 00	MECHANICAL EQUIPMENT									
		MISCELLANEOUS STORAGE TANKS AND PUMPS		100 00 TN	-	-		270	11,529	6,059	17,588
		WATER TREATMENT DEMINERALIZATION & CHEMICAL TREATMENT EQUIPMENT		100 00 TN		-		203	8,647	4,544	13,191
		MISCELLANEOUS EQUIPMENT		120 00 TN		-		243	10,376	5,453	15,829
		TURBINE ROOM OH CRANE, 75/20 TON		1 00 EA	-	-		225	9 608	5 049	14,657
		TURBINE ROOM GANTRY CRANE, 5 TON		1 00 EA	-	-		28	1 196	628	1 824
		CONDENSER		160 00 TN		-		324	13,835	7,271	21,105
		CIRCULATING WATER SYSTEM EQUIPMENT		100 00 TN		-		203	8,647	4,544	13 191
		CIRCULATING WATER SYSTEM EQUIPMENT	10 TN GANTRY CRANE	20 00 TN	-	-		41	1,729	909	2 638
		MECHANICAL EQUIPMENT						6,356	283,701	139 903	423 605
	10 34 00	HVAC									
		MAIN BUILDING HVAC		1 00 LT	-	-		225	9,608	5,049	14 657
		HVAC						225	9,608	5 049	14 657
	10 35 00	PIPING									
		PIPING, VALVES AND HANGERS	BOILER AND TURBINE PLANT	250 00 TN	-	-		506	21,617	11 360	32 977
		CIRCULATING WATER SYSTEM EQUIPMENT PIPING AND TUNNELS		1 00 LS	-	-		480	20,496	10 771	31,267
		PIPING, VALVES AND HANGERS	BOP	94 00 TN	-	-		190	8,128	4,271	12 399
		HYDRANTS		1 00 LS	-	-		113	5,534	5,119	10,653
		PIPING						1,289	55,775	31 522	87 296
	10 41 00	ELECTRICAL EQUIPMENT									
		TRANSFORMERS	MPT AND AUXILIARY TRANSFORMER	57 00 TN	-	-		152	6,503	3,418	9 921
		LIGHT FIXTURE		400 00 EA	-	-		160	6 832	3 590	10 422
		MISCELLANEOUS ELECTRICAL EQUIPMENT	GENERATOR BUS INCLUDED	85 00 TN	-	-		303	12,932	6 796	19,728
		OUTDOOR LIGHTING		1 00 LT	-	-		225	11 068	10,238	21,305
		ELECTRICAL EQUIPMENT						840	37,335	24 042	61,377
	10 42 00	RACEWAY, CABLE TRAY, & CONDUIT									
		CONDUIT		72 00 TN	-	-		468	19,984	10,502	30,486
		CABLE TRAY		72 00 TN	-	-		432	18,446	9 694	28,140
		RACEWAY CABLE TRAY, & CONDUIT						900	38,430	20 196	58,626
	10 43 00	CABLE									
		COPPER WIRE / CABLE		69 00 TN	-	-		690	29,463	15 484	44,947
		CABLE						690	29,463	15,484	44,947
		WHOLE PLANT DEMOLITION						**18,306**	**839,905**	**421,811**	**1,261,715**
18.00.00		**SCRAP VALUE**									
	18 10 00	CARBON STEEL									
		CARBON STEEL		-3,998 00 TN	-	(663 668)	-				(663,668)
		CARBON STEEL	RAILROAD TRACK RAIL	-59 00 TN	-	(9,794)	-				(9,794)
		CARBON STEEL				(673 462)					(673,462)
	18 30 00	COPPER									
		SOLID COPPER	ISO PHASE	-1 00 TN	-	(4 270)	-				(4,270)
		#1 INSULATED COPPER WIRE 65%		-69 00 TN	-	(155,181)	-				(155,181)
		COPPER				(159,451)					(159,451)
		SCRAP VALUE				**(832,913)**					**(832,913)**
21.00.00		**CIVIL WORK**									
	21 17 00	EARTHWORK EXCAVATION									
		FOUNDATION EXCAVATION, USING 1 CY BACKHOE	CONTAMINATED SOIL SAND BENEATH OIL TANK	4 830 00 CY	-	-		725	40,043	12,440	52,483
		MASS EXCAVATION	LEVEL BERMS AND DIKES	407 00 CY	-	-		16	838	1,539	2,378
		EARTHWORK, EXCAVATION						741	40,882	13,979	54,861
	21 21 00	MASS FILL									

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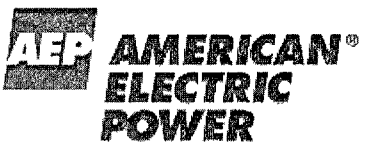
AEP SWEPCO
LONE STAR POWER STATION
DEMOLITION COST ESTIMATE

Sargent & Lundy

Group	Phase	Description	Notes	Quantity	Subcontract Cost	Scrap Value	Material Cost	Man Hours	Labor Cost	Equip Amount	Total Cost
	21 21 00	MASS FILL									
		MASS FILL COMMON EARTH USING DUMP TRUCK, 10 MI ROUND TRIP	COVER DISTURBED AREAS OF SITE WITH 2FT OF SOIL	7 326 00 CY	-	-	190 476	256	13 205	24 246	227 927
		MASS FILL					190,476	256	13 205	24 246	227,927
	21 47 00	LANDSCAPING									
		HYDRO SEEDING		3 00 AC	6,468	-	-		-	-	6,468
		LANDSCAPING			6,468						6,468
	21 52 00	WASTE DISPOSAL									
		DISPOSAL AND TRANSPORTATION FEE	BUILDING DEBRIS	1,500 00 CY	27,000	-				-	27 000
		DISPOSAL AND TRANSPORTATION FEE	CONTAMINATED SOIL, SAND BENEATH OIL TANK	4 830 00 CY	144 900	-				-	144 900
		WASTE DISPOSAL			171,900						171,900
		CIVIL WORK			**178,368**		**190,476**	**997**	**54,087**	**38,225**	**461,156**



H.D. Mattison Plant Units 1-4

CONCEPTUAL DEMOLITION COST ESTIMATE

Prepared for:
Southwestern Electric Power Company (Owner)
and American Electric Power

Project No. A13351.021
August 17, 2020
Revision 0

55 East Monroe Street
Chicago, IL 60603-5780 USA

Revision Number	Date	Purpose	Prepared By	Reviewed By	Approved By	Pages Affected
A	7/24/20	Comments	G. Amen	B. Andric		All
0	8/17/20	Use	G. Amen	B. Andric	A. Redd	All

TABLE OF CONTENTS

1.0 INTRODUCTION

The H.D. Mattison Plant Units 1 through 4 located near Tontitown, Arkansas in Washington County is owned and operated by Southwestern Electric Power Company (SWEPCO), a subsidiary of American Electric Power (AEP). The plant consists of four simple cycle GE 7EA combustion turbine generating units with a total rated generating capacity of 342 megawatts. Units 1 through 4 were placed in operation in 2007.

Sargent & Lundy (S&L) previously prepared a Conceptual Demolition Cost Estimate for H.D. Mattison Plant Units 1-4 in 2012 and 2016. AEP recently contracted S&L to update the previously prepared cost estimate to 2020 pricing levels. The objective of the conceptual demolition cost estimate is to determine the gross demolition costs for H.D. Mattison Plant Units 1-4 (including gross salvage credits and any other benefits). The cost estimate considers the demolition/dismantlement methodology which complies with current OSHA rules and regulations.

2.0 COST ESTIMATE SUMMARY

Conceptual Demolition Cost Estimate No 24245F was prepared and is included as Exhibit 1. The cost estimate is structured into a code of accounts as identified in Table 2-1.

Table 2-1
Cost Estimate Code of Accounts

Account Number	Description
10	Demolition Costs
18	Scrap Value Costs
21	Civil Work Costs
90, 91, 92	General Conditions Costs
93	Indirect Costs
94	Contingency Costs
96	Escalation Costs

The results of the cost estimate are provided in Table 2-2 below:

Table 2-2
Cost Estimate Results Summary

Description	Total Cost
Demolition Direct Cost	$ 2,925,101
Scrap Value	($ 638,204)
General Conditions Cost	$ 1,014,800
Indirect Cost	$ 394,000
Contingency Cost	$ 497,200
Total Project Cost	$ 4,192,897

3.0 TECHNICAL BASIS

The scope of dismantlement includes the complete H.D. Mattison Plant Units 1-4 generating facility and plant common services associated with the unit. Common facilities include:

- Maintenance/Office/control Building
- Electrical Building
- Miscellaneous Site Buildings
- Raw Water Storage Tank
- Demineralizer Tanks

The following are excluded from the scope of the conceptual demolition cost estimate:

- Switchyard and Substation
- Asbestos Removal

The following items were included in the current cost estimate and were not included in the 2016 cost estimate:

- Added new warehouse building, 60 ft x 40 ft.

Revisions to the plant facilities that would affect the current cost estimate was provided by plant personnel through correspondence.

4.0 COMMERCIAL BASIS

4.1 General Information

The Conceptual Demolition Cost Estimate prepared for the H.D. Mattison Plant is a conceptual estimate of the cost to dismantle H.D. Mattison Plant Units 1-4. Costs were calculated for (1) demolition of existing plant structures and equipment and associated site restoration costs. (2) scrap value of metals, (3) associated indirect costs, and (4) contingency. All units used in the cost estimate are U.S. Standard and all costs are in US Dollars (2020 levels). A one (1) year demolition schedule is anticipated. All units will be demolished at the same time.

4.2 Quantities/Material Cost

Quantities of pieces of equipment and/or bulk material commodities used in this cost estimate were intended to be reasonable and representative of projects of this type. Material quantities were estimated from the site plot plan and other drawings and data provided by AEP and Plant Personnel.

4.3 Construction Labor Wages

Craft labor rates (Craft Hourly Rate) for the cost estimate are based on the prevailing wages for Littlerock, Arkansas as published in "R.S. Means Labor Rates for the Construction Industry", 2020 Edition. These prevailing rates are representative of union or non-union rates, whichever is prevailing in the area. Costs have been added to cover social security, workmen's compensation, federal and state unemployment insurance. The resulting burdened craft rates were then used to develop typical crew rates applicable to the task being performed

4.3.1 Labor Work Schedule and Incentives

The estimate assumed a 5x8 work week. No other labor incentives are included.

4.3.2 General Conditions Costs

Allowances were included in the cost estimate as direct costs as noted for the following:

- Labor Supervision
- Construction Management
- Field Office Expenses
- Safety
- Temporary Facilities
- Mobilization / Demobilization
- Legal Expenses / Claims
- Small Tools & Consumables
- General Liability Insurance
- Construction Equipment Mobilization / Demobilization
- Freight on Material
- Contractor's General and Administrative Costs
- Contractor's Profit

4.4 Scrap Value

The value of scrap is based on "Scrap Metals Market Watch" as published in the July 2020 Edition of "American Recycler News" (www.americanrecycler.com) using Zone 3 (USA Southwest). The values obtained are delivered prices to the recycler. Transportation cost to the recycler is assumed @ 30 $/ton resulting in the values below:

- Carbon Steel Value @ 166 $/ton
- #1 Insulated Copper Wire 65% @ 2249 $/ton
- Stainless Steel @ 830 $/ton

Note: 1 Ton = 2,000 Lbs

4.5 Indirect Costs

Allowances were included in the cost estimate as indirect costs as noted for the following:

- Engineering, Procurement and Project Services: None included.
- Construction Management Support: None included.
- Owners Cost: Included as 10.0% of the total direct labor and material cost. Owners Costs include owner project engineering, administration and construction management, permits and fees, legal expenses, taxes, etc.

4.6 Escalation

No allowance for escalation was included in the cost estimate.

4.7 Contingency

We believe the available information and inputs to the demolition cost estimate warrant a 15% contingency. However, we have applied a 10% contingency in the current demolition cost estimate because the Commission ordered the use of a 10% contingency in SWEPCO's 2016 rate case (Docket No. 46449). Allowances were included in the cost estimate as contingency as noted for the following:

- Scrap Value: Included as a 10.0% reduction in the salvage value resulting in a total net reduction in the salvage value. The contingency assumes a potential drop in salvage value thus increasing the project cost.
- Material: Included as 10.0% of the total material cost.
- Labor: Included as 10.0% of the total labor cost.
- Indirect: Included as 10.0% of the total indirect cost.